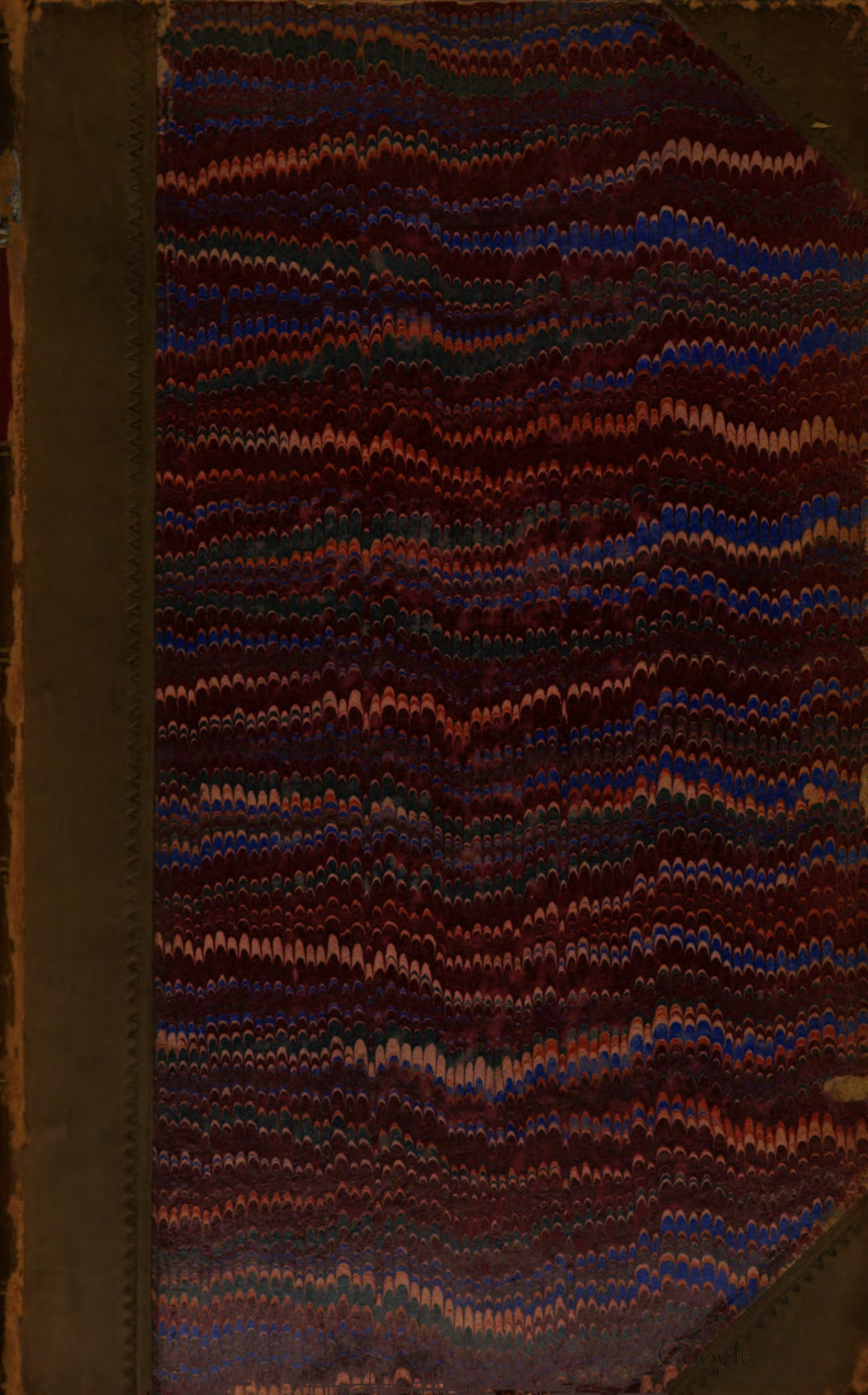
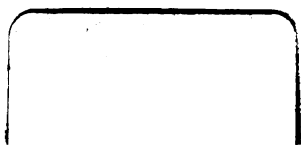

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ARMY MEDICAL DEPARTMENT

531

REPORT

FOR THE YEAR 1886;

WITH APPENDIX.

VOLUME XXVIII.



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1888.

Price Three Shillings and Fourpence.

TO THE RIGHT HONOURABLE
THE SECRETARY OF STATE FOR WAR.

SIR,

I HAVE the honour to submit the accompanying
Report on the Health and Sanitary Condition of the
Army for 1886.

I have the honour to be,

SIR,

Your most obedient

Humble Servant,

T. CRAWFORD,

Director-General.

MEDICAL DIVISION, WAR OFFICE,
June 1888.

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NOMENCLATURE AND CLASSIFICATION OF DISEASES.

The nomenclature of diseases prepared by a committee appointed by the Royal College of Physicians and published in the year 1868, was adopted in the Army Medical Statistics from the 1st January 1869, and continued in use until the end of 1885.

During the latter year a revised edition of this nomenclature was adopted, and in consequence it has been found impracticable to continue in its present form the statistical information hitherto given of the sickness and mortality from different diseases in previous years, as a basis of comparison with those of the present year.

For this purpose it will be necessary to recommence this statistical information according to the new arrangement of the tables, and this will be carried out in future years.

Meanwhile, with regard to the year under report, comparisons are afforded in the text as to the general results of sickness and mortality with those of the previous year and with those of the average of former years, and endeavours have also been made, as far as possible, to give similar information regarding the more important diseases or groups of diseases.

The changes that have been necessarily introduced in the statistical returns used in the Army Medical Department are explained in the following instructions.

INSTRUCTIONS for the guidance of Medical Officers regarding the Revised Nomenclature of Diseases.

A revised edition of the Nomenclature of Diseases having been published by the Royal College of Physicians and adopted by the Registrar-General, it has become necessary to follow, in the Army Medical Service, the nomenclature used in civil life in order to ensure, for statistical purposes, conformity of practice in the classification of diseases, and afford one and the same basis of comparison for both. All the statistical returns at present in use have been revised, and it becomes necessary to indicate the principal changes that have taken place, and the manner in which departmental sick returns are affected in consequence.

The first division of diseases is classified in the new nomenclature as diseases of the whole body, and diseases which may be distributed in several parts at one time (general diseases).

It will be seen that this class is more comprehensive than that included in general diseases in the former edition, with which it corresponds.

This great class is divided into four groups—

- A. Diseases dependent on morbid poisons (specific febrile diseases).
- B. Diseases dependent on external agents other than morbid poisons.
- C. Developmental diseases.
- D. Not classified.

Group A is divided into five sub-groups—

No. 1 comprises the exanthemata, continued fevers, diphtheria, cholera, &c. It will be noticed that dysentery finds a place in this sub-group, instead of being relegated to the digestive system as formerly. Epidemic diarrhoea is also to be returned here.

Sub-groups 2 and 3.—Malarial fevers and septic diseases respectively.

Sub-group 4.—Venereal diseases—gonorrhoea as well as syphilis—are included in this sub-group.

Sub-group 5 comprises febrile diseases, communicable from animals to man, such as hydrophobia.

Group B is divided into four sub-groups—diseases produced by parasites, poisons, injuries and errors in diet, respectively.

In the nomenclature it will be observed that this group of diseases is printed in smaller type than the others, but the numbers prefixed to the different diseases are in regular sequence with those of other groups. This group (B) was provided in order that all diseases or affections coming under the definition of general diseases might be classed together, but for military statistics it has been determined that injuries and poisons should be placed in the separate positions elsewhere assigned to them (pages 199 and 215). Group B will consequently consist of Sub-group 1, parasitic diseases, and of Sub-group 4, diseases from errors of diet, for which no other places are provided in the nomenclature.

It will be remarked that parasitic diseases do not include those caused by ectozoa, which are separately provided for (*see* page 197).

A list of the various animal and vegetable parasites is found in the Appendix, page 284.

Diseases from errors of diet (Sub-group 4) include alcoholism and delirium tremens, which are not to be classed under poisons as heretofore. This sub-group will, for convenience, be termed No. 2 in the Departmental Returns.

Group C.—Developmental diseases. Debility is now classed under this head.

Group D.—Not classified. Among the affections under this heading the following require notice:—Non-malignant new growth and malignant new growth. A classification of tumours comprising these new growths and cysts will be found at page 307, and directions are given as to the manner in which the various tumours should be returned; thus, cysts are to be recorded severally among the local affections of organs, and are printed in italics; but proliferation tumours, printed in ordinary type, are to be returned under this group in non-malignant or malignant new growths, as the case may be. Next comes tubercle, and for a list of its processes reference must be made to page 315. It will be noticed that the term phthisis pulmonalis has disappeared, and that in the Departmental Returns the term tubercle of lung has been inserted.

Local Diseases.—In this class the changes are not so marked. Diseases of the nervous system have been divided into sub-sections, and this arrangement permits of mental disease being shown separately in all returns.

Diseases of the ear and nose are, in the summaries of diseases in Departmental Returns, classed together under diseases of other organs of special sense.

Diseases of the absorbent system no longer appear as such in the nomenclature, but are represented by diseases of the lymphatic system, followed by diseases of the thyroid body and those of the supra-renal capsules. Diseases of the spleen are now classed under the lymphatic system. In the summaries of diseases in Departmental Returns all these are taken together as diseases of the lymphatic and glandular systems.

Diseases of the urinary system no longer include those of the urethra and prostate, which have been transferred to the generative system.

Gonorrhœa is now shown in Sub-group 4, Group A, and its sequelæ, such as balanitis, phimosis, &c., are also to be returned under that sub-group (*see* directions in foot notes).

Diseases of the connective tissue appear in the nomenclature in place of those of the cellular tissue, and diseases of the skin in place of those of the cutaneous system.

Poisons are returned in the same manner as heretofore, except that alcoholism and delirium tremens have been removed as before mentioned.

Injuries.—No great change has taken place under this head, except that sunstroke and heat apoplexy are now to be returned under general injuries, and not, as formerly, under the nervous system. Exhaustion and shock are also classed under this head.

T. CRAWFORD,
Director-General.

ARMY MEDICAL DEPARTMENT REPORT FOR 1886.

STATISTICAL REPORT.

THE average annual strength of the troops serving at home and abroad in 1886, as computed from the returns received by the Army Medical Department, was 188,739 warrant officers, non-commissioned officers and men (exclusive of the Royal Malta Fencible Artillery, the 1st and 2nd West India Regiments, and the Gun Lascars at Ceylon, and at Hong Kong, Corps which are recruited locally); the admissions into hospital in this force were 204,792 and the deaths 2,189. The rates represented by these numbers are for admissions into hospital 1085·1 and for deaths 11·48 per 1,000 of the average annual strength, the latter being calculated on a strength of 190,639, which includes detached men.

*Troops at
Home and
Abroad.*

The statistics of some of the most important of the results of sickness, in every Command in which the troops were stationed, are exhibited in the following Table :—

1886.

White Troops.	Average Strength.	Admitted into Hospital.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad }	188,739	204,792	2,189	2,610	2,828	10,743·52
United Kingdom - -	92,601	78,089	632	—	1,667	4360·31
Gibraltar - - -	4,307	3,634	41	116	80	211·38
Malta - - - -	4,736	3,435	34	77	59	220·82
Cyprus - - - -	636	682	7	7	—	32·32
Egypt - - - -	11,062	14,070	408	928	270	820·54
Canada - - - -	1,283	751	3	23	20	38·77
Bermuda - - -	1,227	781	15	20	20	42·30
West Indies - -	1,020	1,192	15	14	12	56·19
Cape of Good Hope and St. Helena - -	3,971	3,211	17	73	51	194·95
Mauritius - - -	414	597	9	16	6	31·38
Ceylon - - - -	949	1,079	10	14	10	58·55
China and Straits Settlements - -	2,269	2,665	26	22	20	112·12
India - - - -	61,757	91,630	958	1,300	663	4563·89
On board Ship - -	2,507	2,976	14	—	—	—

1886.

*1 troops at
Home and
Abroad.*

White Troops.	Ratio per 1,000 of Strength.					Average sick-time to each Soldier.	Average duration of each case of Sickness.
	Admitted.	Died.	Sent Home as Invalids.	Discharged Invalids.	Constantly non-effective from Sickness.		
Troops at Home and Abroad	* 1085·1	† 11·48	‡ 27·88	§ 15·03	57·69	Days. 21·06	Days. 19·43
United Kingdom	843·3	6·68	—	17·64	47·08	17·18	20·38
Gibraltar	843·7	9·51	26·93	6·96	49·07	17·91	21·23
Malta	725·2	7·17	16·25	12·45	46·62	17·02	23·46
Cyprus	1072·3	11·00	11·00	—	50·81	18·55	17·30
Egypt	1271·9	36·88	88·89	24·40	74·17	27·07	21·29
Canada	585·3	2·84	17·98	15·59	30·22	11·08	18·84
Bermuda	636·5	12·22	16·29	16·29	34·47	12·58	19·77
West Indies	1168·6	14·70	18·73	11·76	55·09	20·11	17·21
Cape of Good Hope and St. Helena	808·6	4·28	18·38	12·84	49·09	17·91	22·16
Mauritius	1442·0	21·73	38·64	14·49	75·79	27·66	19·18
Ceylon	1136·9	10·63	14·75	10·53	61·68	22·52	19·81
China and Straits Settlements	1174·5	11·45	9·69	8·81	49·41	18·03	15·35
India	1483·7	15·51	21·05	10·73	73·90	26·97	18·18
On board Ship	1187·1	5·58	—	—	—	—	—

* Calculated on strength, excluding men detached (1,900).

† Calculated on strength, including men detached.

‡ Calculated on strength, excluding United Kingdom and troops on board ship.

§ Calculated on strength, including men detached, and excluding troops on board ship.

|| Calculations exclude men detached and troops on board ship.

1876 to 1885.

White Troops.	Aggregate for strength 10 years.	Admitted into Hospital.	Deaths.	Sent Home as Invalids.	Discharged Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad	1,709,574	1,833,075	20,433	31,240	36,739	88,019
United Kingdom	869,772	736,701	6,278	—	22,714	38,759
Gibraltar	45,877	87,428	317	1,441	638	2,332
Malta	48,871	41,929	501	1,405	744	2,488
*Cyprus	4,851	7,760	88	219	75	364
†Egypt	23,958	31,786	628	2,451	814	1,867
Canada	16,472	11,969	91	406	301	629
Bermuda	17,158	10,772	130	302	172	584
West Indies	9,535	8,520	147	258	133	426
Cape of Good Hope and St. Helena	54,748	45,382	2,133	3,219	1,203	2,785
Mauritius	3,837	8,865	67	169	60	318
Ceylon	9,767	10,988	139	362	144	577
China and Straits Settlements	19,504	20,435	201	815	348	967
India	556,783	838,513	9,514	20,198	9,388	36,023
On board Ship	28,441	22,027	199	—	—	—

* For eight years only.

† For three years only.

1876 to 1885.

*Troops at
Home and
Abroad.*

White Troops.	Ratio per 1,000 of Strength.					Average sick-time to each Soldier.	Average duration of each case of Sickness.
	Admitted.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.		
Troops at Home and Abroad	1072·2	11·70	38·50	21·39	52·36	19·11	17·74
United Kingdom -	847·0	6·93	—	25·07	44·56	16·26	19·20
Gibraltar -	815·8	6·91	31·41	13·90	48·65	17·76	21·77
Malta -	857·9	10·25	28·75	15·22	50·91	18·58	21·66
*Cyprus -	1599·7	18·14	45·14	15·46	75·03	27·39	17·12
†Egypt -	1326·8	26·21	102·31	38·98	77·95	28·45	21·44
Canada -	726·6	5·52	24·65	18·27	38·19	13·94	19·18
Bermuda -	627·8	7·57	17·60	10·02	34·03	12·42	19·79
West Indies -	893·5	15·42	26·53	13·95	44·68	16·31	18·25
Cape of Good Hope and St. Helena -	828·9	38·96	58·80	22·06	50·87	18·57	22·40
Mauritius -	2310·4	17·46	44·04	15·64	82·88	30·25	13·09
Ceylon -	1125·0	14·23	37·06	14·74	59·07	21·56	19·17
China and Straits Settlements -	1047·7	10·30	41·78	17·84	49·58	18·10	17·27
India -	1506·0	17·09	36·28	16·86	64·70	23·61	15·68
On board Ship -	774·5	6·99	—	—	—	—	—

* For eight years only.

† For three years only.

United
Kingdom.

II.—ON THE HEALTH OF THE TROOPS SERVING IN THE UNITED KINGDOM.

Sickness and Mortality.

The average strength of warrant officers, non-commissioned officers and men serving in the United Kingdom during the year, calculated from the returns furnished by medical officers, was 92,601. The number of admissions into hospital was 78,089, there were 632 deaths (including 44 of men detached from their corps, the average number of whom is computed to have been 1,900), and the number of invalids discharged the service was 1,667. The average number of daily sick was 4360·31, the average sick time to each soldier 17·18 days, and the average duration of each case of sickness 20·38 days.

The ratios per 1,000 of strength obtainable from these figures are, for admission 843·3, for mortality 6·68, for invaliding 17·64, and for constant inefficiency through sickness 47·08.

Comparing these ratios with those of the previous year it is observed that there is a decline of 34·1 per 1,000 in that of admission, one of 3·97 in that of invaliding, and one of 1·38 in that of constantly sick, but the mortality ratio remains unchanged. The average sick time to each soldier was shorter than the corresponding period in the preceding year by half a day, but the average duration of each case of sickness was longer by about one fifth of a day.

In comparison with average similar ratios for the preceding decennium, a decline of 3·7 per 1,000 is observed in the admission ratio, one of ·25 in the death rate, and one of 7·43 in the invaliding rate; but there is an increase of 2·52 per 1,000 in the rate of constantly sick. The average sick time to each soldier, and the average duration of each case of sickness, are longer than the corresponding decennial average periods by ·92 days and 1·18 days respectively.

The total loss for the year by death and final discharge of men from the service by invaliding was 2,299, equal to a ratio of 24·32 per 1,000, which is lower than that in the preceding year by 3·97 per 1,000.

The admissions, deaths, invaliding, &c., in the various groups and orders of diseases are given in Abstract I., and similar information for the different military districts will be found in the Abstracts lettered from A to O.

GENERAL DISEASES.—*Diseases dependent on morbid Poisons.*—*Specific Febrile Diseases.*—The admissions for affections classed in the first division or sub-group of this large group of diseases numbered 1,874, and the deaths 60, while the average number of constantly sick was 102. The ratio of admission, therefore, was 20·2 per 1,000, that of mortality ·64, and that of constantly sick 1·10 per 1,000.

Eruptive Fevers caused 609 admissions, which give a ratio of 6·5 per 1,000, which is greater by 2·0 than the corresponding ratio in the preceding year, and is also above the average rate. There were only two deaths, the mortality ratio was therefore a small fraction, and was less than in the previous year.

Small-pox was the cause of 11 admissions, but no death occurred. In the preceding year there were 19 admissions and 3 deaths, but these were above the average. Three of the cases in the year under report occurred at Woolwich, two of them mild, and the other confluent; their origin could not be traced. At Dover there were two cases, at Aldershot two cases, modified, and at Warley one case, modified; the cause of these cases was not discovered. At Fermoy one case occurred, which was contracted on furlough; at Winchester a severe case, contracted in the town, whither the disease was supposed to have been brought by gipsies and one case occurred at Exeter in the person of an

orderly, who had been attending on cases of this disease, six of which took place in a militia regiment in the early part of the year, when, it is said, the disease was prevalent in the outlying districts, and there were some cases in the city. *United Kingdom.*

Scarlet fever, which in the previous year had fallen to 1·1 from 2·0 per 1,000, still further declined in the year under report, the number of cases being only 47, or ·5 per 1,000, as compared with 96, and no death occurred. The cases were scattered all over the kingdom, the only districts which escaped entirely being the Chatham and North British districts.

The greatest number of cases in one station was 8 at Canterbury; it is reported that they were mild in character, and were all contracted out of barracks; 4 cases occurred at Hounslow, imported from elsewhere; also 4 in Dublin, 3 at Christchurch, 2 each at Reading, Portsmouth, Dover, Alderney, Dundalk, and the Curragh, and the 12 remaining were single cases occurring at as many different stations.

Measles was much more prevalent than in the preceding year, 286 cases having occurred as compared with 128. The ratio of admission to strength was 3·1 per 1,000, being more than twice that recorded in 1885, and greater than that in 1884 by 1·0 per 1,000. Every district was affected, though some to a slight degree only. The greatest number of cases in any one district was 56 in the Southern district, of which 38 cases occurred at Portsmouth, one being fatal, and 13 at Gosport; the disease was epidemic at these stations. In the Cork district there were 38 cases, most of which occurred in the city itself, where the disease was epidemic in the spring of the year. In the Eastern district 21 cases occurred at Colchester, 10 at Bury St. Edmunds, and 1 at Warley, or 32 in all. At Woolwich there were 31 cases and one death; the disease was most prevalent in April and May, but, it is said, the disease is rarely absent from the place. In the Home district 26 cases occurred, all but two in London; in the South-eastern 25 cases, 22 being at Canterbury, where the disease was epidemic among the civil population; and at Aldershot 24 cases. These are followed by the Dublin district with 19 cases, 5 in Dublin, 5 at Birr, 4 at Galway, 3 at Naas, and 2 at Castlebar; and by the Northern district with 15 cases, spread over eight stations, of which Wrexham shows 4 and York 3 cases. In the North British district there were 8 cases and in the Western 6, and the remaining 6 cases were divided among four districts.

Eleven admissions are returned for epidemic rose rash; of these six occurred at Taunton, where it is reported the disease was epidemic among the civil population; two cases occurred at Exeter; and there was one case at Aldershot, Woolwich, and Cork respectively. The remaining admissions for eruptive fevers comprised 7 of chicken-pox and 247 of cow-pox, as compared with 14 and 139 respectively in the preceding year.

Continued Fevers caused 987 admissions and 51 deaths, and were in the ratios of 10·7 and ·55 per 1,000 of the strength respectively. In the preceding year the ratio of admission was 13·1 and that of mortality ·53 per 1,000; in the year under report, therefore, there was a decline in admission rate equal to 2·4 per 1,000, though the death rate is fractionally higher. The ratio of men constantly sick, ·62 per 1,000, shows also a slight increase in this comparison. The admission ratio is also considerably lower than the average, taking that of the preceding five years, the decrease being equal to 4·6 per 1,000; the mortality ratio, however, is higher, owing chiefly to the deaths from enteric fever, but the rate of constant inefficiency on account of these fevers is slightly above the average.

The admissions and deaths from *enteric fever* were 145 and 43 respectively, almost the same as in the previous year, when they numbered 146 and 42. There is, consequently, but little difference in these ratios of prevalence and mortality, those for the year under report being 1·6 and ·46 per 1,000, and those for 1885 being 1·7 and ·48 per 1,000 respectively; but the ratios for both these years are a good deal higher than the average corresponding ratios for the preceding decennial period, which were 1·2 and ·27 per 1,000 respectively. The per-centage of deaths to attacks was 29·6, in the previous year it was 28·8, the average decennial per-centage being 22·3. All the districts but three were affected with this disease to some extent, the exceptions being the Chatham, Channel Islands, and Belfast districts, the first two of which also had immunity in the previous year. The districts most affected were the Southern,

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and those of Dublin and Cork. 48 stations in all were affected, in varying degree, Dublin showing the highest number of admissions and deaths at any one station, 18 and 10 respectively; of these 9 cases, 5 of which were fatal, came from the Royal barracks, and were treated at Arbor Hill hospital; all the patients, with one exception, were young soldiers. Three cases (one fatal) occurred at Beggars' Bush barracks, one case of which, however, was contracted at Belfast; and of six cases treated at the Royal Infirmary two cases came from lodgings in the town, one from Ship Street barracks, and one from the Royal barracks, all of which proved fatal. The remaining two cases recovered; one came from Pigeon House Fort and one from Richmond barracks. It has not been possible for medical officers to trace the origin of all these cases to local sanitary defects in barracks, still it is believed that in some instances it has been so, as many of the barracks are old and badly constructed as regards drainage, particularly the Royal barracks, on which an exhaustive inquiry has been held; at the same time it must not be forgotten that sanitation in the city itself is far from perfect, and that some of the cases may have been contracted out of barracks. At Cork 12 cases occurred, 4 of which were fatal; and at Queenstown and the outposts there were 5 cases, 1 fatal; it is stated that none of these cases could be traced directly to any sanitary defects in barracks, but at Spike Island the existence of cesspit privies, and the fact that the water was found, on analysis, to be of indifferent quality, may account for the cases admitted from that station. Twelve cases, one of which was fatal, were treated at Aldershot, five in the South Camp and seven in the North Camp; among the latter were four cases in which the patients were guardsmen who were quartered at Pirbright. It is said that the cases could not be distinctly traced to any insanitary condition, but that it was believed that in the cases from Pirbright the disease was caused by drinking canal water, and consequently a strict prohibition against the use of this for drinking purposes was issued. At Portsmouth 10 cases and 7 deaths occurred; four of the cases came from shipboard, but the remainder occurred in the station itself, where, it is said, the disease existed among the civil population. At Portland 9 cases, 2 of which were fatal, occurred, these were all in men of the Dorset Regiment recently arrived from Egypt, where the regiment had suffered severely from this disease. There were also 3 cases at Weymouth in a detachment of the same regiment. Eight cases occurred in London, but all recovered, two of the cases came from Knightsbridge barracks, three from Chelsea, two from the Tower, and one showed itself in hospital; most of these cases were, it is believed, contracted outside barracks. At Dover there were 6 cases, 2 of which were fatal; they all occurred in men of the 2nd East Kent Regiment recently arrived from Egypt. At Exeter there were 4 cases and 2 deaths, at York 4 cases and 1 death, and at the Curragh 3 cases and 1 death; in none of them could the disease be attributed to any insanitary condition in barracks, and in one case at the last-mentioned station the disease was imported from another place. Three cases occurred at Pierhill, which were due, it is believed, to defective drainage in the barracks; the cases recovered, and the insanitary conditions were rectified. There were three cases at Norwich which could not be traced to defective sanitation, and three cases at Netley, all of these recovered. Two fatal cases occurred at Fleetwood, due to defects in drainage which were subsequently remedied. Two cases occurred at Clonmel and two at Limerick with one death at each place; none of these could be traced directly to any insanitary condition in barracks, and there were two cases at Canterbury, one fatal, which were believed to have been contracted out of barracks. Two cases, recoveries, occurred at Colchester, and two at Pembroke Dock, for which no cause was traced; two cases at Great Yarmouth, the origin of which was not distinctly traced, though the drainage appears to have been suspected, two cases at Woolwich, which were believed to have been contracted at Malta, and two at Parkhurst, which were also contracted away from the station. Single fatal cases occurred at Warley and Winchester, both having been contracted elsewhere, and at Fermanagh and Kinsale, which could not be traced to any defect in sanitation; also at Newcastle, Castlebar, and Galway, for which no local insanitary cause is given. There were single cases, which recovered, at Coventry, Leeds, Sheffield, Devonport, Hamilton, Buttevant, Cahir, Templemore, and Tralee; for these it is reported that no insanitary cause could be

traced; at Lichfield, Hounslow, and Ayr, which were contracted away from the *United Kingdom* stations; and at Chester, Windsor, Manchester, Edinburgh, and Glasgow, of which the origin is not recorded.

Other Continued Fevers caused 842 admissions and 8 deaths, being in the ratios of 9·1 and ·09 per 1,000 respectively, as compared with 11·4 and ·05 per 1,000 in the preceding year. Among the cases was one of typhus, which occurred at Killarney. It is said that there is no doubt the disease was contracted in the town. There were also 14 cases of cerebro-spinal fever, of which 13 occurred at Devonport and 8 died, while the 5 patients who recovered only did so after a protracted convalescence. The medical officer in charge remarks that the epidemic began in January and lasted until May; the disease chiefly attacked young soldiers, and, although no definite source could be traced, there was strong presumptive evidence that it might be exposure to cold, impure air, want of sufficient food and clothing prior to enlistment, and, possibly, want of proper ventilation which laid the foundation of the disease. The remaining case of this disease occurred in Dublin, but the origin of it is not stated. Simple continued fever caused the remainder of the admissions, 827 in number. Among the different administrative districts it is observed that the highest rate of prevalence, 17·4 per 1,000, was in the Western district, followed by 14·4, 14·3, and 13·2, per 1,000 in the Dublin, Cork, and Belfast districts respectively; the lowest rate was in the Woolwich district, 3·1 per 1,000, which was also the case in the previous year; next above came the Channel Islands with 3·7 and the Eastern district with 3·9 per 1,000. Compared with the returns for the preceding year an increase of prevalence, equal to 8·0 per 1,000, is observed in the Western district, and one of 6·4 in the Cork district; in the Aldershot district there was a decrease of 11·4, in the Home district one of 8·6, in the South-eastern one of 7·8, in the Channel Islands 6·6, and in the Eastern district one of 6·5 per 1,000, in the remaining districts the differences were not great.

Dysentery was the cause of 87 admissions and 6 deaths, being in the ratios of ·9 and ·06 per 1,000 respectively. 25 of the cases occurred in the Southern district, 10 in the Eastern district, 8 each in the South-eastern and Home districts, 7 in the Northern district, and 7 at Woolwich, also smaller numbers in all the remaining districts, except the North British, in which no case occurred.

Other diseases of this sub-group caused 191 admissions and 1 death, the ratios being equal to 2·1 and ·01 per 1,000. The cases comprised 89 of influenza, 97 of mumps, and 5 of diphtheria. Influenza was, as in the preceding year, most prevalent in the North British district, and next in the Northern, Belfast, and Cork districts. Mumps occurred in most of the districts, the greatest number of cases being in that of Aldershot, followed by the Cork, Belfast, and Home districts. The cases of diphtheria occurred as follows: two at Newcastle-on-Tyne, and one in London, Glasgow, and Aldershot, respectively; the first four cases terminated favorably, but that at Aldershot ended fatally. This disease was less frequent than in the preceding year, when 8 cases and 2 deaths were recorded.

Malarial Fevers were the cause of 562 admissions, being in the ratio of 6·1 per 1,000, which is lower than the corresponding rate in the preceding year by 1·7 and is below the average rate, which, taking that of the previous five years, was 9·3 per 1,000. Of the total number of admissions 24 are returned as remittent fever and the remainder as ague. The greatest prevalence of malarial fevers during the year was in the Southern district, the ratio being 12·9 per 1,000; the next ratio of prevalence was 9·7 in the South-eastern district, followed by 7·5 per 1,000 in that of Woolwich; in the preceding year, also, the last two districts had comparatively high ratios of prevalence. The lowest ratios are observed in the Channel Islands, 1·5 per 1,000, and the North British and Belfast districts 2·7 and 2·8 respectively. Compared with the corresponding ratios in the preceding year the rates of prevalence of these fevers have declined in all the districts except three, the greatest decrease being 9·5 per 1,000 in the Channel Islands, then 6·6 in the South-eastern district, and 5·9 in the Eastern district; the three districts showing an increase are the Southern, 4·2, the Home district, 2·1, and the Belfast district, 1·2 per 1,000. Of the cases of remittent fever 14 occurred at Aldershot, where there were also 51 cases of ague. The Principal Medical Officer

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of this division remarks "that the malarial fevers occurred for the most part in men from Egypt and the Mediterranean, and in those from Malta the remittent type prevailed, and the cases were characterised by extreme and prolonged debility." The remaining cases of remittent fever were scattered over seven different districts, two cases having occurred in the Northern, Southern, and Chatham districts and one case in the Western, Home, Dublin, and Cork districts respectively.

Under the sub-group of *septic diseases* are recorded 251 admissions and 5 deaths, equal to ratios of 2·7 and ·05 per 1,000 respectively. The admissions comprise 243 for erysipelas, 4 for pyæmia, 3 for septicæmia, and one for phagedæna. The cases of pyæmia occurred at Aldershot, Devonport, Brighton, and the Curragh, one respectively, and all were fatal. The three admissions recorded as septicæmia took place at Belfast, Brighton, and Pembroke Dock, the last case terminating fatally. The case of sloughing phagedæna occurred at Dundalk and ended favorably.

The cases of erysipelas give an admission ratio of 2·6 per 1,000, which compares favorably with the corresponding ratio in the preceding year, 3·3 per 1,000. No death occurred from this disease in either year. Cases occurred in every district except the Channel Islands, the greatest number being 47 in Aldershot, and the least, of the districts affected, 3 at the Curragh. Of the cases at Aldershot it is stated that "their origin was not satisfactorily determined, although generally attributed to exposure to the influences of the weather in men of intemperate habits." In the Southern district there were 23 cases, 14 of which occurred at Portsmouth and 4 at Gosport; in the South-eastern district there were also 23 cases, 11 of which occurred at Shorncliffe, 5 at Canterbury, and 4 at Dover. 21 cases occurred in the Home district, more than half in London. Following these are the Cork district with 18 cases, the North British with 17, Woolwich with 16, Dublin and the Northern districts each with 15, the Western and Belfast with 13 respectively, the Eastern with 12 and Chatham with 7 cases.

In sub-group 4, *venereal diseases*, 8,236 admissions are returned for primary syphilis; 3,097 with 5 deaths for secondary syphilis, and 10,632 for gonorrhoea, making a total of 21,965 admissions, which is equal to a ratio of admission of 237·2 per 1,000. If to these be added the number of admissions for simple venereal ulcers, 2,766, returned according to the new nomenclature under diseases of the generative system, the total number of admissions for all forms of venereal disease was 24,731, being in the ratio of 267·1 per 1,000 of strength as compared with 275·4 in the preceding year and with 259·0 the average admission rate for the preceding quinquennial period. The number of men constantly sick during the year on account of some form of venereal disease was 1785·84, equal to a ratio of 19·29 per 1,000, which is lower than the corresponding ratio in the preceding year by ·05, but higher than the average ratio for the preceding five years by ·99 per 1,000.

The admission ratio for *primary syphilis* alone was 88·9 per 1,000, and the ratio of men constantly non-efficient on account of this disease, 7·75 per 1,000. But, as under the new method of registration of diseases, the term primary syphilis is restricted to those cases likely to be followed by constitutional symptoms to the exclusion of local venereal sores not likely to be so followed, these ratios are not by themselves comparable with those under the same head in former years, which embraced both descriptions of primary venereal sore. If, however, the ratios of admission and constantly sick on account of simple venereal ulcers, which are recorded among diseases of the generative system, are added to the ratios for primary syphilis above quoted, it is found that the ratio of admissions for primary venereal sores would reach 118·8 per 1,000, which is less than the corresponding rate in the preceding year by 8·6 per 1,000, but greater than the average admission ratio for the previous five years by 4·4 per 1,000. Similarly the rate of constant inefficiency on account of primary venereal sores was 9·65 per 1,000, which is lower than the corresponding rate in the previous year by ·56, but higher than the quinquennial average ratio by ·52 per 1,000.

The ratios of prevalence of primary syphilis alone vary considerably in the different districts, the highest ratio being 166·3 per 1,000 in the Aldershot district, followed by 130·6 in the Western district, and 129·6 in that of Dublin. The lowest rate of prevalence was 43·3 per 1,000 in the Cork

district, next above being 51.1 in the Eastern district, and 56.8 in the North British district. If the ratios for simple venereal ulcers are added to the ratios for primary syphilis, it is observed that the highest ratios of prevalence of primary venereal sores are still found in the Aldershot, Dublin, and Western districts, though their order is slightly altered; the lowest ratio of prevalence also is still found in the Cork district, the North British district being next above, followed by the Chatham district.

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Compared with the return for the preceding year, increase of prevalence of primary venereal sores has occurred in five of the different districts, and decrease is observed in the remainder. Those in which increase is most marked are the Western and Southern districts, the increment being 33.0 and 26.8 per 1,000 respectively, while those in which decline is greatest are the Channel Islands, a decrease of 54.7, the Home district, one of 45.7, the Chatham district, one of 44.6, and the Dublin district, one of 29.6 per 1,000; in the remaining districts the variations are not great.

The ratio of admission for secondary syphilis was 33.5 per 1,000. Five deaths are returned under this head, and the rate of constant inefficiency was 2.59 per 1,000. Compared with the previous year's return the admission ratio shows an increase of 6.7, and the constantly sick ratio one of .49 per 1,000. In comparison with quinquennial average rates also increase is observed in both these ratios, equal to 4.5 in the former case and .30 per 1,000 in the latter. The highest ratio of prevalence of secondary syphilis in any district was 50.7 per 1,000 in that of Dublin, followed by 46.6 in the Home district, and 40.8 in the Western district; the lowest ratio was in the Curragh, 16.6 per 1,000, next in the Channel Islands, 19.1, and 21.4 in the Cork district. Compared with the returns for the preceding year increase of prevalence has occurred in 11 districts, most markedly in the Southern, Dublin, and Woolwich districts, the increase being 17.4, 15.2, and 11.3 per 1,000 respectively; in the four instances in which a decrease of prevalence is noticed the decline is not great in any, the most marked being 6.1 per 1,000 in the Channel Isles, and 5.9 in the South-eastern district.

The ratio of admission for gonorrhœa was 114.8, and that of constantly sick 7.05 per 1,000. By the new nomenclature of diseases all those affections formerly termed the sequelæ of gonorrhœa are included under this head, and these ratios are therefore comparable with those of gonorrhœa in former years only when the ratios for the sequelæ are also included. In this manner the ratio of admission for gonorrhœa in the year under report shows a decline of 6.4 per 1,000 as compared with the return for the preceding year, and compared with the corresponding average ratio for the preceding five years a decline of 1.5 per 1,000. The ratio of constant inefficiency, 7.05 per 1,000, differs only by a small fraction from that in the previous year, and only by an increase of .17 from the average rate of the preceding five years.

Taking the different districts, it is observed that gonorrhœa was most prevalent in the Dublin district, where the ratio reached 178.9 per 1,000, then in the Eastern district, 143.6, and then in the Belfast district, 134.9; the lowest ratios of prevalence are found to have been in the Cork, Curragh, and North British districts, being 75.6, 81.9, and 88.2 per 1,000 respectively. Comparing the rates of prevalence in the districts with similar results in the preceding year, it is observed that in only three districts are they increased, in that of Belfast by 18.9, in that of Dublin by 18.4, and in the Eastern district by 16.3 per 1,000; in all the remainder a decrease is observed, varying from 40.7 per 1,000 in the Channel Islands and 22.8 in the Chatham district, to fractional quantities in the Western and Southern districts.

Examining into the relative prevalence of venereal disease in the different administrative districts it is found that the highest ratio (including all forms of the disease) was 389.8 per 1,000 in the Dublin district, and the lowest, 150.2, in the Cork district. The intermediate ratios were as follows: Aldershot 317.5, Western 297.3, Home 288.7, Belfast 282.6, Southern 272.9, Eastern 265.9, Northern 265.4, Woolwich 254.1, Channel Islands 247.4, South-eastern 242.8, Chatham 211.7, Curragh 199.1, and North British 191.2 per 1,000. If these ratios are compared with corresponding results in the previous year an increase is observed in five instances and a

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decrease in ten. Among the instances of increase the most marked are 43·3 per 1,000 in the Southern district, 42·2 in the Western, and 28·8 in the Belfast district; and among the instances of decrease are 101·5 per 1,000 in the Channel Islands, 66·3 in the Chatham district, 50·7 in the Home district, 48·9 in the Curragh, and 48·5 in the South-eastern district.

In the next group of general diseases are recorded the sickness and mortality from parasitic disease and diseases due to errors in diet.

Under the head of *parasitic* diseases are recorded 62 admissions and one death. Among the cases were 46 of *tænia solium*, and one of *echinococcus hominis* which terminated fatally.

Scurvy was the cause of 8 admissions; in the preceding year the number of admissions was 15.

The admissions returned under the head of *alcoholism* were 308 in number, equal to a ratio of 3·3 per 1,000; of the total number of cases 36 were recorded as delirium tremens. There were 7 deaths, 4 of which were returned as delirium tremens and 3 as alcoholism. Though the sickness due to alcoholic excess is now returned in a different manner to that which obtained in former years, and therefore the results are not exactly comparable, yet examination of the returns of this and the preceding year seem, to show that while there has been increased sickness on this account there has been a diminution in the mortality from it.

In the group of developmental diseases are returned 755 admissions and one death, the ratio of admission being 8·2 per 1,000. Of the cases 750 were recorded as *debility* and 5 as malformations. The greatest number of admissions occurred in the Home, Southern, and Northern districts. In the preceding year the admissions for debility were in the ratio of 10·8 per 1,000.

In the last group of general diseases are found rheumatism, tubercular diseases, and various others "not classified."

Rheumatism caused 3,709 admissions and 4 deaths, being in the ratios of 40·1 and ·04 per 1,000 respectively, which compare favorably with 47·7 and ·07 in the preceding year, and differ but little from the average rates for the preceding five years, which were 41·4 and ·06 respectively. Of the total number of cases 422 were returned as rheumatic fever. The greatest prevalence of rheumatic affections occurred in the Woolwich district, the ratio being 59·4 per 1,000, next to which was Aldershot with 53·2, and the Dublin district with 47·3; the least prevalence was in the Channel Islands, the ratio being 19·8, the South-eastern district came next above with 26·7 and then the Belfast district with 30·1 per 1,000. Compared with the preceding year a decrease of prevalence of rheumatic affections has taken place in most of the districts, to the extent of 29·6 per 1,000 in the Eastern district, 22·9 in the South-eastern district, and 21·5 in the Channel Islands. Of four districts in which an increase took place, that of Woolwich was the only one in which the increase was of any amount, being 13·3 per 1,000.

Tubercular Diseases.—Under this head are returned 362 admissions and 111 deaths, being in the ratios of 3·9 and 1·17 per 1,000. These ratios differ considerably from those under the same head in the previous year which were 7·5 and 1·57, also from the average ratios for the preceding five years, 8·6 and 1·93 per 1,000 respectively. This is, probably almost entirely owing to the changes due to the new nomenclature of diseases and the disappearance of the term *phthisis pulmonalis*, a considerable number of cases which formerly would have been returned as such being now recorded as *pneumonic phthisis*, &c. under diseases of the respiratory system.

Of the total number of admissions 319 are returned as tubercular disease of the lungs, and of the deaths 103 are referred to the same cause.

The ratios of prevalence of tubercular disease varied from 5·6 per 1,000 in the Dublin district, and 5·5 in the Home district, to 2·1 in the Northern district, the next above being 2·3 in the Belfast district. The mortality ratio was highest in the Southern district, 1·53 per 1,000, followed by the Channel Islands and Woolwich with 1·47 and 1·46; the lowest ratio was in the Chatham district, ·30, the Cork and Aldershot districts being next above with ·72 and ·78 per 1,000 respectively.

The admissions for *other diseases* of this group were 443 in number and 10 deaths are recorded. The respective ratios, therefore, were 4·8 and ·11 per 1,000. The admissions comprise 343 for non-malignant new growths with one death from tumor of the cerebellum; 4 admissions for malignant disease and 4 deaths; 54 cases returned as scrofula with 2 deaths, 43 cases of anæmia with one death, 14 cases of diabetes with two deaths, and 11 admissions for various other causes. United Kingdom.

LOCAL DISEASES.—*Diseases of the nervous system* were the cause of 924 admissions into hospital and 45 deaths, being in the ratios of 9·9 and ·48 per 1,000 respectively, which are lower than the corresponding ratios in the preceding year by 2·3 and ·09, and than the average ratios for the previous five years by 1·8 and ·03 per 1,000 respectively. The greatest prevalence of nervous affections occurred in the Eastern district, 15·5, and the Dublin district, 14·2 per 1,000, while the least is observed in the Belfast district, 5·3, and in the Channel Islands and in the Chatham district 6·6 per 1,000. Prevalence of these affections declined in most of the districts, to the greatest extent in the Chatham and Belfast districts, by 8·7 and 7·4 respectively; in the Woolwich, Dublin, and Curragh districts, prevalence was slightly increased. Of the total number of admissions 180 were for mental disease, or 1·9 per 1,000, as compared with 194 admissions, or 2·2 per 1,000, in the preceding year. The 744 remaining admissions include 346 cases of neuralgia, 199 of epilepsy, 55 of paralysis, 27 of meningitis, 17 of encephalitis, and many others. The causes of mortality were meningitis 23 cases, apoplexy 5, paralysis 6, epilepsy 4, sclerosis and abscess of brain of each 2, tetanus 2, and myelitis one case.

Diseases of the Eye caused 1,281 admissions into hospital, the ratio of admission being 13·8 per 1,000, which differs but little, an increase of ·6, from the corresponding ratio in the preceding year, and from the quinquennial average rate by a decline of ·7 per 1,000. Eye affections were most prevalent in the Cork district, the ratio reaching 18·3 per 1,000, and the Channel Islands, Eastern, Western, and Southern districts also had high ratios; the lowest ratio was in Belfast, 8·7 per 1,000, and those of the Woolwich and North British districts were not much higher. Prevalence increased to some extent as compared with the previous year in the Eastern district, and decreased in the Channel Islands and the Belfast districts; in other cases the variations were not very marked. Of the total number of admissions 907, or nearly three fourths, were due to simple conjunctivitis.

Diseases of other organs of special sense caused 596 admissions, equal to a ratio of 6·4 per 1,000, slightly below the rate in the preceding year, but just about the average rate of these affections. 37 of the admissions were due to affections of the nose and the remainder to aural diseases.

Diseases of the Circulatory System were the cause of 835 admissions and 50 deaths, being in the ratios of 9·0 and ·53 per 1,000 respectively. The ratio of admission is below that of the preceding year by ·9 per 1,000, and a good deal below the average ratio of the previous five years. The mortality ratio is increased as compared with the foregoing year by ·12 per 1,000, but is slightly below the average rate. As in the preceding year, the highest ratios of prevalence of these affections are found in the Eastern and South-eastern districts, 15·7 and 14·3 per 1,000, though they are both lower than in that year; the lowest ratios were in the Channel Islands and North British district, 4·4 and 5·0 per 1,000 respectively. Compared with corresponding ratios in the preceding year the ratios of prevalence in all the districts, with the exception of the Eastern, show very little variation. The mortality rates varied from 1·04 per 1,000 in the Woolwich district to nil in the Channel Islands, but in all the remaining districts fractional ratios occurred.

The principal causes of admission were palpitation 365 cases, valvular disease of the heart 270 cases, varicose veins 101 cases. The admissions for palpitation were equal to 44 per cent. of the total number for diseases of this system, and those for valve disease to 32 per cent. The causes of mortality were valvular disease of the heart 19 cases, hypertrophy of the heart 5 cases, fatty degeneration 4, clots in heart 2, dilatation of heart 1, pericarditis 3, endocarditis 1, hydropericardium 1, aneurysm 12 (of the aorta in 11 instances), and degeneration of the aorta 2 cases.

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Diseases of the Respiratory System caused 7,323 admissions and 173 deaths, being in the ratios of 79·1 and 1·83 per 1,000 respectively. These ratios are considerably increased both when compared with those that correspond in the preceding year as well as with the average ratios calculated for five years. This increase is due, not only to a greater prevalence of respiratory disease as hitherto recorded, but to the different method of registration under the new nomenclature of diseases by which many cases which formerly would have been returned as phthisis pulmonalis are now shown as diseases of the respiratory system. An increase is also observed, generally speaking, in comparing the rates of prevalence and mortality from respiratory diseases in the different districts with the corresponding ratios in the preceding year. The greatest prevalence of respiratory disease occurred in the Home district, the ratio being 106·6 per 1,000, and the Woolwich, Dublin, and Aldershot districts also show high ratios, 88·8, 86·5, and 84·9 respectively; the least prevalence is observed in the Channel Islands, where the ratio does not exceed 37·5 per 1,000; the remaining Irish districts have comparatively low ratios of prevalence, that of Belfast being 47·3, that of the Curragh 61·9, and that of Cork 67·4 per 1,000. The highest mortality rates occurred in the Northern and Woolwich districts, 2·94 and 2·91 per 1,000, and the lowest *nil* in the Curragh and ·83 in the North British district. Of the total number of admissions 5,866, or rather over four-fifths of the whole, were due to bronchial affections. Among the remainder, 822 were cases of pneumonia, 259 of pleurisy, 126 of pneumonic phthisis, 98 of laryngitis, and 39 of asthma. The deaths were caused as follows:—106 were due to pneumonia, 37 to pneumonic phthisis, 15 to bronchitis, 9 to pleurisy, 5 to empyema, and 1 to laryngitis.

Diseases of the Digestive System caused 9,233 admissions and 46 deaths, being in the ratios of 99·7 and ·49 per 1,000 respectively. These ratios are not exactly comparable with those of previous years on account of certain alterations brought about by the new nomenclature of diseases, the sickness and mortality from dysentery being no longer shown under this head but under the first sub-group of specific febrile diseases or diseases due to morbid poisons, and that from diseases of the spleen being referred to diseases of the lymphatic system. However, the changes are not so great as to prevent an approximate knowledge of increase or decrease being obtained by comparison with previous results. In this manner it is found that the admission ratio is somewhat lower than in the preceding year, and also lower than the average to a considerable extent, in both cases more than could be accounted for by the difference in method of registration referred to. With regard to mortality, the ratio is lower than in 1885, but does not differ greatly from the average rate.

The greatest prevalence of diseases of this system in any district was in Aldershot, where the ratio equalled 123·0 per 1,000; the Eastern, Southern, and Western districts also show high ratios of prevalence, 116·5, 112·3, and 104·4 respectively; the lowest ratio of prevalence, 53·6 per 1,000, was in the Channel Islands, those nearest above being 62·8 in the Belfast district, 83·2 in the North British district, and 88·9 in the Northern district. Compared with results in the preceding year, decrease of prevalence occurred in 11 of the districts, the decline being most marked in the South-eastern and Home districts as well as in the Channel Islands; in the four instances in which the ratios are higher the increase in each case is very small. Mortality varied from 1·47 per 1,000 in the Channel Islands to *nil* in the Home district. In the Eastern and North British districts the ratios were 1·18 and ·83, and among low ratios were ·10 in the Aldershot district and ·12 per 1,000 in both the Cork and Dublin districts.

Of the total number of admissions 5,623 were due to tonsillitis and other affections of the mouth and throat, and were at the rate of 61 per cent. Among the remaining admissions were 1,382 for dyspepsia, 628 for diarrhoea, 587 for hepatic diseases, of which 315 are returned as jaundice, and 21 as abscess of the liver. The causes of death were as follows: peritonitis 8 cases, abscess of the liver 16, cirrhosis of the liver 6, hepatitis 4, enteritis 3, ulcer of stomach 3, and post-pharyngeal abscess, gastritis, intestinal obstruction, perityphlitis, jaundice, and ascites one case respectively.

Diseases of the Lymphatic and Glandular System.—Under this head are returned diseases of the spleen, formerly shown with those of the digestive system; diseases of the lymphatics; and those hitherto grouped as diseases of ductless glands, viz.: diseases of the thymus and thyroid glands and of the supra-renal capsules. The number of admissions for these diseases was 1,957, equal to a ratio of 21·1 per 1,000. Of the total number of admissions 1,690 are returned as inflammation and 229 as suppuration of glands; 21 cases of splenic disease occurred, 8 of goitre, and 9 of other affections. One death is returned from Addison's disease. The prevalence of these affections was greatest in the Dublin and Aldershot districts, the ratios being 40·9 and 37·6 per 1,000, and least in the Channel Isles and Western district with 8·1 and 9·0 respectively.

Diseases of the Urinary System.—The number of admissions returned under this head was 231, and there were 20 deaths, being in the ratios of 2·5 and ·21 per 1,000 respectively. The ratio of admission for urinary diseases appears very small compared with those formerly returned under this head, but in consequence of the changes brought about by the new nomenclature of diseases this order now includes only diseases of the kidney and ducts, urinary disorders, and diseases of the bladder; for not only has gonorrhoea and its sequelæ been removed as already shown, but diseases of the urethra and prostate gland have been transferred to diseases of the generative system. The admissions for urinary diseases include 39 for nephritis, 28 for Bright's disease, 28 for cystitis, 99 for incontinence of urine, and 37 for various affections. The causes of death were Bright's disease 10 cases, nephritis 4, and abscess, hæmorrhage, cystic disease, cystitis, embolism of the kidney, and lardaceous kidney one case respectively.

Diseases of the Generative System show a far greater admission ratio than formerly, not only on account of the reason above referred to, but also on account of local venereal lesions as the soft sore, or chancroid, and simple venereal ulcers being returned under this head. The total number of admissions recorded was 4,814, and there were 4 deaths. More than half the admissions, 2,766, were cases of ulcer of the penis, the ratio being equal to 29·8 per 1,000. Among the other admissions were 761 for orchitis, 229 for stricture of the urethra, 62 for varicocele, and 54 for hydrocele. Of the deaths two were returned from extravasation of urine, one from stricture of the urethra, and one from gangrene of the penis. The ratios of prevalence of these diseases in the different districts vary considerably, and are chiefly affected by the frequency of occurrence of cases of simple venereal ulcer. The highest ratio was 91·8 per 1,000 in the Southern district, followed by 72·8 in the Eastern district.

Diseases of the Organs of Locomotion were the cause of 567 admissions, equal to a ratio of 6·1 per 1,000, which is slightly below the rate in the preceding year, and below the average rate. 271 of the admissions, or 48 per cent. of the total number were due to synovitis. There were 4 deaths, 3 being returned as lumbar abscess and 1 as psoas abscess.

Diseases of the Connective Tissue.—Under this heading 2,303 admissions are recorded, equal to a ratio of 24·9 per 1,000, which is rather below the average rate as well as the corresponding ratio for the preceding year. One death is returned under this order.

Diseases of the Cutaneous System caused 8,450 admissions, the ratio being 91·3 per 1,000, slightly below that in the preceding year and to some extent below the average. The ratio of prevalence varied from 116·0 in the Southern district to 59·1 per 1,000 in the Chatham district. The majority of the admissions were due to itch, ulcers, and boils, the first being in the proportion of 37 per cent., the second 17 per cent., and the last 16 per cent.

Poisons.—21 admissions and 4 deaths are returned under this head, as compared with 187 admissions and 13 deaths in the preceding year. This apparent decrease in frequency is not real, and is caused by the registration of ordinary alcoholism and delirium tremens under diseases due to errors in diet, according to the new nomenclature of diseases, cases of actual alcoholic poisoning only being returned in this place. For the latter 10 admissions occurred, and one death, out of hospital, resulted from this cause. There were

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three admissions for oxalic acid poisoning, a solution of the drug being taken accidentally, and there was one death out of hospital, also accidental. Two cases of poisoning by arseniuretted hydrogen occurred, the men were employed in compressing hydrogen gas for balloons, and it is supposed that the sulphuric acid used in making the gas was impure and impregnated with arsenic; both cases recovered after treatment. A fatal case of poisoning by cantharides occurred, a gunner having swallowed, with suicidal intent, a mixture of blistering fluid and rectified spirit, which was kept in stables for use with battery horses. A case of attempted suicide by opium poisoning occurred, also one by chloroform poisoning. A case of poisoning by cyanide of potassium occurred with fatal result, a verdict of accidental death was returned. The remaining admissions were one case of lead poisoning in a deserter, a painter by trade, one of dog bite, one of stinging insects, and one of poisoning by shell-fish.

Injuries.—General injuries caused 18 admissions and 34 deaths as compared with 9 admissions and 43 deaths in the preceding year. Multiple injury caused 7 admissions and 6 deaths. Among the cases were 2 at Belfast, one of which, due to a railway accident, ultimately recovered, but the other, due to injuries received in barracks, proved fatal. Two fatal cases occurred at Devonport, one from injury on the railway and one from a fall over some rocks. There was also a death at Fort Hubberstone due to an explosion in the laboratory there. At Dover a fatal case occurred resulting from a fall over the ramparts, and one at Chester also, due to a man having jumped or fallen through a barrack room window, a height of 30 feet, it is believed in a state of somnambulism. At Chatham a man was admitted, a heavy roller having passed over his body causing severe injuries, among which there is little doubt was fracture of the base of the skull, but he eventually recovered. Nine admissions were due to the effects of heat, returned as sunstroke or heat apoplexy, but all recovered. One man died of shock, the result of a severe fall, which fractured his pelvis. 24 cases of death by drowning took place, 20 of which were accidental; several happened while bathing, and some through the upsetting of boats. There were two cases in which an open verdict was returned, and two cases were suicidal. The three remaining deaths were also due to asphyxia, and occurred as follows, one man was suffocated in a snow drift near Warley, and the other two were cases of suicide, one by suffocation and the other by strangulation.

Local injuries caused 8,960 admissions and 45 deaths, being in the ratios of 96·8 and ·48 per 1,000, as compared with 106·7 and ·42 respectively. The great bulk of the admissions was due to contusions, wounds, and sprains, and equalled 83·5 per cent. of the total number; the principal causes of the remainder of the admissions were blisters of the feet, 576 cases; fractures, 406; burns and scalds, 276; dislocation, 75; gunshot wound, 42; and concussion of the brain, 22 cases. Of the deaths, 26 were the result of gunshot wound, 20 cases being suicidal, one homicidal, a man having been shot in the riots at Belfast, in July, and 5 accidental, which occurred as follows: two were accidents on the rifle range, the men being markers, two occurred in barracks, in each case men were playing with their rifles, and one was due to the accidental discharge of a revolver. There were 10 deaths caused by fractures; 7 were fractures of the skull, three of these were due to horse accidents, the men being either thrown or kicked; two were due to falls from verandahs, one to a fall down stairs, and one was due to a fall from a window, the man, a somnambulist, either having walked, or accidentally fallen through it; one was a fracture of the cervical vertebræ, in a man detached from his corps, due, it is believed, to an accidental fall; one was a fracture of the spine which happened to a man while trying gymnastic feats; and the last was a compound fracture of the foot, by an engine passing over it, in a man who was lying drunk on the railway. Three deaths are returned from wounds, all cases of cut-throat, suicidal. Two deaths occurred from compression of the brain, one due to a fall, and the other resulting from injuries received while fighting with a comrade in the barrack room. One death was due to contusion of stomach with rupture of viscera, resulting from a kick from a horse; one death was due to concussion of the brain, the result of a fall, and one to concussion of the

cord, due to a man diving into very shallow water; there was also a death by hanging, suicidal, in which it is reported that dislocation of the vertebræ occurred. *United Kingdom.*

277 cases returned as *no appreciable disease* complete the number of admissions during the year, and one death returned as "cause unknown," which occurred in a man detached from his corps, completes the number of deaths.

The total number of suicides among the troops serving at home was 29, equal to '31 per 1,000 of strength, as compared with 30 suicides, or '34 per 1,000, in the preceding year. The modes of suicide were as follows: gunshot wound 20 cases, hanging 2, cut-throat 3, drowning 2, and suffocation and poisoning by cantharides 1 case respectively. In 18 cases no motive could be discovered; in 4 financial difficulties were the cause; 5 cases are ascribed to drink, 1 to jealousy, and 1 to matrimonial quarrels. A verdict of suicide while in a state of temporary insanity was returned in 26 instances, in one a verdict of suicide was given, in one an open verdict, and in the remaining case there was no record. The average age of the suicides was 28 years, and their average length of service 8 years.

Attempted suicide is recorded in 10 instances, of which 4 were cases of gunshot wound, 4 cases of cut-throat, 1 of laudanum, and 1 of chloroform poisoning. In three of these cases no motive is recorded, three were attributed to drink, one case occurred in a man suffering from melancholia, one case is said to have been due to mental distress caused by the desertion of his wife, one case was ascribed to mental depression, and in one case it is said the act was committed because the man was dissatisfied with the regiment into which he had enlisted.

Surgical Operations.—The following are recorded among the operations performed at the various stations during the year:—An amputation of the arm on account of injuries received in a fall through a skylight, with satisfactory result; three amputations of the thigh, one at the upper third on account of compound fracture, and one at the lower third on account of malignant disease of the head of the tibia, in both of which the result was satisfactory; in the remaining case, however, an amputation at the middle third on account of caries, a fatal result ensued from tetanus; there was also an amputation at the ankle-joint of a foot which had been crushed by a heavy arm chest falling upon it, and one at the mediotarsus on account of a crush from a locomotive engine; a satisfactory result followed in the former case, but in the latter death ensued; many cases of minor amputations, thumbs, fingers, and toes, are also recorded, all of which were successful. An excision of the wrist on account of necrosis of some of the small bones, partial excision of the tibia, also for necrosis, trephining the head of the tibia, and incision into the knee joint, both on account of abscess, were performed with satisfactory result in each case.

Among other operations were two of excision of the eyeball on account of disease in one case and of injury in the other; three cases of strabismus, all of which were successful; and a case of iridectomy with abstraction of the lens on account of glaucoma, in which the result was not successful. Eight cases of paracentesis thoracis on account of empyema are recorded, seven of which gave satisfactory results, but one case died. Tracheotomy was performed in a case of diphtheria, but without success. Two cases of strangulated hernia were operated on, but only one successfully, the other proving fatal. In two cases of aspiration for hepatic abscess also, success only attended one case, death ensuing in the other. Removal of a fibrous tumor from the great trochanter, removal of a tumor from the neck, and one from the septum of the nose, and of an epithelioma from the lower lip were all satisfactorily performed. Successful results were obtained also in two cases of perineal section for urinary fistula, in one case of internal urethrotomy, and in one case of forcible dilatation (Holt's operation) for stricture. An operation to unite a divided ulnar nerve was successful, also various operations for fistula in ano, hæmorrhoids, hydrocele, &c., and many others of a minor character.

Invaliding.—The total number of men discharged the service by invaliding during the year was 1,667, being in the ratio of 17·64 per 1,000 of the strength,

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which is lower than the corresponding ratio in the preceding year by 3·97, and than the decennial average rate by 25·07 per 1,000.

As observed in the preceding year also, the most frequent causes of invaliding were diseases of the circulatory system, 298 men, or 3·15 per 1,000, being discharged as unfit on this account; the ratio, however, has declined by ·48; and diseases of the nervous system, 262 men, or 2·77 per 1,000, as compared with 3·45 in the preceding year; of these 124, or 1·31 per 1,000, were invalided on account of mental disease. Next in order of frequency come tubercular diseases with 151 men discharged invalided, or 1·60 per 1,000; followed by diseases of the respiratory system with 137, or 1·45 per 1,000, while in the previous year the corresponding ratios were 3·25 and ·79 respectively; the decrease in the former and the increase in the latter ratio are very marked, and are due in great measure to the alterations in recording cases necessitated by the new nomenclature of diseases. The number of men invalided for debility was 130, or 1·37 per 1,000; for disorders of the digestive system 115, or 1·22; for injuries 99, or 1·05; and for diseases of the organs of locomotion 89, or ·94 per 1,000; all these ratios have declined more or less from those recorded for the same diseases in the preceding year. The invaliding ratios for the remaining orders of diseases are all fractional, and, as a rule, are lower than the corresponding rates in the previous year, though the decrease is in most cases slight.

With regard to invaliding at different periods of service it is observed that out of the total number invalided 1,041 were discharged on this account within the first five years of service, and if the ratio per 1,000 be calculated on a strength of 69,430 (taken from a table in the General Annual Return of the Army for 1886) it will be found to be 14·99; in the next period, of 5 to 10 years' service, there were 279 men invalided, or 20·02 per 1,000, strength being 13,935; from 10 to 15 years, 81 men were invalided out of a strength of 5,658, the ratio being 14·31 per 1,000; from 15 to 20 years' service, 199 men were invalided, or 30·07 per 1,000, strength being 6,616; and over 20 years' service there were 67 invalided out of a strength of 2,404, being in the ratio of 27·87 per 1,000. In each of the quinquennial periods a decrease is observed in the rate of invaliding as compared with that in the preceding year, the greatest decrease, 7·16 per 1,000, being in the 10 to 15 years' period, and the least, 2·61, in the 5 to 10 years' period. The ratios of invaliding in the later periods are, as usual, higher than in the earlier periods on account of the number of older soldiers discharged out of a comparatively small strength. Out of the total number of men invalided 62 per cent. of them were in the first quinquennial period of service, 17 per cent. in the second, 5 per cent. in the third, 12 per cent. in the fourth, and 4 per cent. in the last period of service. It is observed that these proportions show scarcely any alteration as compared with those recorded in the previous year.

In the first year of service only there were 383 men discharged the service by invaliding, which gives a ratio of 12·66 per 1,000, the strength being taken as 30,236. This ratio shows a decline of 2·67 per 1,000, as compared with the rate recorded in the previous year. The per-centage of men invalided under one year's service was 23, the same as in the two previous years. Comparisons have been made between ratios of invaliding for certain causes in the first year of service and in total service. Cardiac disease, for instance, gave a rate of 2·75 per 1,000 in the first year, and one of 2·54 in total service; epilepsy caused invaliding of ·99 men per 1,000 under one year's service and ·87 in total service; mental affections show a rate of 2·12 per 1,000 in the first year and one of 1·31 in total service; and tubercular disease of the lung caused an invaliding rate of only ·50 per 1,000 in the first year of service as compared with 1·43 in the whole period of service. All these ratios have declined from those in the preceding year, particularly those referring to tubercular disease of the lungs, for the reasons above mentioned.

Invaliding at different ages gave the following results: There were 256 men invalided who were under 20 years of age, the average strength of whom, calculated from a table in the return above mentioned, was 27,901; the ratio to strength was therefore 9·17 per 1,000; between 20 and 25 years 665 men were invalided out of an average strength of 40,754, giving a ratio of 16·32 per 1,000; between 25 and 30 years, out of a strength of 14,892 there were

366 invalided, or 24·58 per 1,000; between 30 and 35 years 122 men were discharged by invaliding, the average strength 6,626, giving a ratio of 18·41 per 1,000; between 35 and 40 years, out of an average strength of 5,955 there were 179 men invalided, or 30·06 per 1,000, and over 40 years of age, the strength being 19·15, there were 79 invalided, or 41·25 per 1,000. It will be observed that the ratios of invaliding increase with the different periods of age, and that the increase in the period 25 to 30 years is greater in proportion to those of other periods near it. Compared with the record in the previous year a decrease has occurred at all the different periods of age, but generally not to any great extent. Out of the total number invalided the per-centage invalided under 20 years was 15, between 20 and 25 years of age 40, between 25 and 30 years 22, between 30 and 35 years 7, between 35 and 40 years 11, and over 40 years of age 5 per cent. These proportions also show scarcely any difference as compared with the similar proportions in the preceding year.

The admissions, deaths, and average number constantly sick in the various military districts are shown in the following table:—

Military Districts.	Average Annual Strength.	Admitted into Hospital.	Died.	Average Number constantly Sick.	Ratio per 1,000 of Mean Strength.			Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					Admitted into Hospital.	Died.	Constantly Sick.		
1. Northern	10,872	9,063	78	431·14	833·6	7·17	39·65	14·47	17·36
2. Eastern	5,084	4,451	28	208·16	875·5	5·51	40·94	14·94	17·07
3. Western	5,568	5,069	52	286·31	910·4	9·34	51·42	18·77	20·61
4. Southern	9,164	8,335	68	473·47	909·5	7·42	51·66	18·85	20·73
5. Chatham	3,334	2,473	19	141·39	741·8	5·70	42·41	15·47	20·86
6. South-eastern	7,405	6,094	42	359·62	822·9	5·67	48·56	17·72	21·54
7. Home	7,771	6,842	49	400·12	880·4	6·30	51·49	18·79	21·34
8. Woolwich	4,800	3,956	44	278·18	824·2	9·17	57·95	21·15	25·66
9. Aldershot	10,220	9,576	44	587·69	937·0	4·31	57·50	20·98	22·40
10. North British	3,640	2,573	16	122·85	706·9	4·40	33·75	12·32	17·43
11. Channel Islands	1,361	808	11	47·72	593·7	8·08	35·06	12·80	21·56
12. Belfast	3,550	2,554	25	114·10	719·4	7·04	32·14	11·73	16·30
13. Dublin	8,143	8,097	57	468·09	994·3	7·00	57·48	20·98	21·10
14. Cork	8,378	5,873	42	290·21	701·0	5·01	34·64	12·64	18·03
15. Curragh	3,311	2,325	13	151·26	702·2	3·92	45·68	16·61	23·74
Detached from the Corps.	1,900	—	44	—	—	28·15	—	—	—
Total	94,501	78,089	632	4,360·31	843·3	*6·68	47·08	17·18	20·38
Average of 10 years, 1876–85.	—	—	—	—	847·0	6·93	44·56	16·26	19·20

* Calculated on strength, including men detached.

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From the above table it is observed that the highest ratio of admission to hospital in any district was 994·3 per 1,000 of strength in the Dublin district, followed by the Aldershot district with 937·0, and the Western and Southern districts with 910·4 and 909·5 respectively. The lowest ratio was 593·7 per 1,000 in the Channel Islands, followed by Cork with 701·0, by the Curragh with 702·2, and by North Britain and Belfast districts with 706·9 and 719·4 respectively. The highest ratios of mortality were 9·34 per 1,000 in the Western district, and 9·17 in the Woolwich district, and the lowest ratios were 3·92 at the Curragh, 4·31 at Aldershot, and 4·40 in North Britain.

The greatest amount of constant inefficiency through sickness occurred in the three districts of Woolwich, Aldershot, and Dublin, the ratios being 57·95, 57·50, and 57·48 per 1,000 respectively; the lowest ratio is observed in the Belfast district, 32·14 per 1,000, the North British coming next with 33·75, the Cork district with 34·64, and the Channel Islands with 35·06. The average sick time to each soldier was longest in the Woolwich district, 21·15 days, then in the Aldershot and Dublin districts, each 20·98 days; the shortest time was 11·73 days in the Belfast district, followed by 12·32 in North Britain, 12·64 in Cork, and 12·80 days in the Channel Islands. The average duration of each case of sickness was longest in the Woolwich district, 25·66 days, and then 23·74 in the Curragh, and 22·40 days in the Aldershot district; the shortest duration was 16·30 days in the Belfast district, then 17·07 in the Eastern district, and 17·36 days in the Northern district.

The following table, compiled from the returns of Principal Medical Officers, shows the admissions, deaths, number of men invalided, and number constantly sick, from each arm of the service, with the ratios per 1,000 of the strength and the corresponding ratios for the previous 10 years :—

Arms of the Service.	Average Strength.	Admitted into Hospital.	Died.	Discharged as Invalids.	Average Number Constantly Sick.	Annual Ratio per 1,000 of Strength.				Average of 10 Years, 1876-85.			
						Admitted.	Died.	Invalided.	Constantly Sick.	Admitted.	Died.	Invalided.	Constantly Sick.
Household Cavalry	1,275	805	6	32	44·40	681·4	4·71	25·10	34·82	658·6	3·73	23·46	34·50
Cavalry	10,119	9,398	50	230	520·88	928·7	4·94	22·73	51·48	929·7	5·61	30·55	49·66
Royal Artillery	15,532	12,126	137	352	734·56	780·7	8·82	22·66	47·29	768·0	7·58	25·18	42·80
Royal Engineers	3,174	1,909	16	43	121·57	601·4	5·04	13·55	38·30	599·0	7·65	18·17	31·86
Foot Guards	5,535	5,500	29	139	344·91	993·7	5·24	25·11	62·31	979·0	7·27	34·00	53·46
Infantry	37,677	34,295	220	611	1936·91	910·2	5·84	16·22	51·41	878·9	6·42	26·32	48·06
Regimental Depôts	13,592	10,172	122	196	421·86	748·4	8·98	14·42	31·04	858·8	10·77	28·92	38·41
Garrison Staff and Departments.	5,697	3,884	52	64	235·22	681·8	9·13	11·23	41·29	595·5	7·94	15·73	37·73

* For eight years only.

† For seven years only.

‡ For nine years only.

From this table it is observed that the highest ratio of admission was in the Foot Guards, 993·7 per 1,000; this arm of the service also gave the highest rate in the previous year as well as the highest rate in the average of the preceding 10 years; the lowest rate was 601·4 per 1,000 in the Royal Engineers, which corps also gave the lowest rate in the previous year as well as in the decennial average. The highest ratio of mortality was 9·13 in the Garrison Staff and Departments, and the lowest 4·71 per 1,000 in the Household Cavalry; in the previous year the highest rate was in the Royal Engineers, and of average rates the highest was in the Regimental depôts; the lowest ratio was also in the Household Cavalry in both these comparisons. The highest ratios of invaliding were 25·11 per 1,000 in the Foot Guards, and 25·10 in the Household Cavalry; in the previous year the highest rates were also in these arms

of the service, but in the 10 years' rates the highest were in the Cavalry and Regimental depôts, the lowest ratios of invaliding were in the Garrison Staff and Royal Engineers, 11·23 and 13·55 per 1,000 respectively, and among average rates these arms of the service also give the lowest rates, but in the preceding year the lowest rate was in the Infantry and then in the Garrison Staff. The highest ratio of constant inefficiency through sickness was 62·31 per 1,000 in the Foot Guards, and the lowest 31·04 in the Regimental depôts. In the previous year the same results were observed; but in average rates, while the highest is in the Foot Guards, the lowest is in the Royal Engineers. Compared with the results for the preceding year the admission, invaliding, and constantly sick ratios have declined in all arms of the service, but with regard to mortality, the ratio has increased in the Household Cavalry, Artillery, Infantry, and Regimental depôts, but has declined in the remainder. In comparison with decennial average rates, the ratio of admission is lower in the Household Cavalry, Cavalry, and Regimental depôts, but is higher in the remaining arms of the service. Mortality has increased in the Household Cavalry, Artillery, and Garrison staff and departments, but has decreased in other arms. Invaliding has decreased in all arms, except in the Household Cavalry and Foot Guards, and the ratios of constantly sick have increased in all arms of the service, except Regimental depôts.

The amount of sickness and mortality from the different classes and orders of diseases among officers, women, and children during the year is given in the tables shown in Abstract P., compiled from the annual returns of Principal Medical Officers of districts.

OFFICERS.—The average strength is recorded as 3,644, the number of attacks of illness 1,177, and the number of deaths 23. The ratio of prevalence of sickness was, therefore, 323·0, and that of mortality 6·31 per 1,000. Compared with the corresponding ratios in the preceding year an increase of 31·2 per 1,000 is observed in the sick rate, and a decrease of 1·29 per 1,000 in the death rate.

General Diseases.—In the first sub-group of *specific febrile diseases* 109 attacks of illness and one death are recorded, being in the ratios of 29·9 and ·27 per 1,000 respectively. Among these there were 39 cases of *eruptive fevers*, including one case of small-pox, in Dublin, two cases of scarlet fever, and 23 of measles, nearly all of which occurred in the English districts.

The returns show 15 cases of *enteric fever* treated at the stations where they occurred, and one case, fatal, which occurred to an officer on leave of absence. These 16 cases give a ratio of prevalence of 4·4 per 1,000, as compared with 9 cases, or 2·8 per 1,000 in the previous year; and as compared with 1·6, the admission ratio among non-commissioned officers and men. The cases occurred as follows:—Three at Portsmouth, for two of which no cause could be given, but in the third it is supposed that the patient, a medical officer, contracted the disease in hospital in the performance of his duties. Three cases happened in Dublin, one at the Linen Hall, Ship Street, and Royal barracks respectively. For the first two cases no insanitary condition in barracks could be discovered as a cause, but with regard to the occurrence of the third case a faulty condition of the ventilation of the sewers is alluded to. There were also three cases at Cork, for the occurrence of which no defect in sanitation could be discovered. Concerning the remaining cases it is stated that in three, one each at Dover, Exeter, and Buttevant, no cause could be traced. In two cases, one occurring at Cionmel and the other in London, the disease was contracted elsewhere than in barracks; and in two cases, one at Gosport, and the other at Kilkenny, the origin of the disease was attributed to an insanitary condition of the drainage.

Other continued Fevers caused 31 attacks of illness; the ratio per 1,000, 8·5, showing a slight decline as compared with that of the preceding year. Among other diseases of this sub-group were two cases of dysentery, two of diphtheria, one of which occurred at Aldershot, and the other in Edinburgh, also 14 of influenza and several of mumps.

Malarial Fevers caused 27 attacks of illness, two being recorded as remittent fever; one death is returned from malarial cachexia. The ratio of prevalence of these fevers, 7·4 per 1,000, has declined by 2·1 from that in the previous year.

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Septic diseases are represented by 4 cases of erysipelas, all of which recovered.

Syphilis and gonorrhœa show in all 54 cases, 41 being for the latter affection; of the former, 6 attacks were for primary disease and 7 for secondary.

In the succeeding group are 25 cases, equal to 6.9 per 1,000, returned as *debility*, the ratio under this head in the previous year having been 4.8.

Out of 70 cases returned in the group of unclassified general diseases are 62 of *rheumatic affections*, 3 being cases of rheumatic fever; the ratio of prevalence of rheumatism, 17.0 per 1,000, compares very favorably with that recorded in the preceding year. Among the remaining cases in this group were a fatal case of tubercular disease of the lung, three of anæmia, three of non-malignant new growth, and one of malignant disease. A death occurred under each of these heads.

Local diseases.—*Affections of the Nervous System* caused 29 attacks of illness and one death. The rate of prevalence was 8.0 per 1,000, showing a decline of 2.1 from the last year's ratio. The principal cause of sickness was neuralgia, 19 cases, and among the remaining cases were three of paralysis one of encephalitis, and one of meningitis, fatal.

Diseases of the Eye were at the ratio of 4.7 per 1,000, being about as frequent as in the previous year. The cases were chiefly conjunctivitis.

Diseases of the Circulatory System caused but little sickness, only 7 cases having occurred. There were, however, two deaths, one from aneurysm of the aorta and the other from rupture of artery.

Respiratory diseases caused 190 attacks of illness, equal to a rate of prevalence of 52.1 per 1,000, an increase of 9.7 on the rate of the preceding year. About five sixths of the illness was due to bronchial affections, and there were 11 cases of pneumonia, 5 of laryngitis, and 2 of pleurisy. Six deaths are recorded, two from bronchitis, pneumonia, and pleurisy respectively.

Diseases of the Digestive System were more frequent than in the preceding year, the ratio of prevalence, 66.7 per 1,000, showing an increase of 8.1. The principal diseases were affections of the throat and tonsils, dyspepsia, and diarrhoea. Hepatic diseases, including 5 of jaundice, numbered 32 cases. Five deaths occurred, one from enteritis, gastric ulcer, cirrhosis of liver, hepatitis, and peritonitis respectively.

Diseases of the Urinary System show a ratio of prevalence of 3.0 per 1,000 only, as compared with 13.9 in the previous year. This decrease, however, is of course due principally to the re-arrangement of diseases under the new nomenclature. Four deaths are returned, all from Bright's disease.

The remaining orders of local diseases do not show any marked difference in ratio of prevalence from those of the preceding year, except in the case of the *cutaneous* system, in which the rate is a good deal increased. The cases, however, were of no special importance.

Injuries were 240 in number, equal to a ratio of 65.8 per 1,000, which differs only very slightly from the corresponding ratio in the preceding year. Contusions, wounds, and sprains, were the principal injuries, numbering together 193 cases; besides these there were 22 fractures, 8 cases of concussion of the brain, 2 of multiple injury, 2 of gun-shot wound, and several others.

WOMEN.—The average strength of women, as calculated from the annual returns, was 9,448; the number of cases of illness, exclusive of cases of ordinary child-birth, was 3,639, and there were 65 deaths.

The ratio of prevalence of sickness was 385.2 per 1,000, which is higher by 7.9 than the corresponding ratio in the preceding year; the mortality rate 6.88 per 1,000 is, on the other hand, lower by .71.

General Diseases.—*Specific Febrile Diseases.*—Sub-group 1 shows 145 cases and 2 deaths, equal to 15.3 and .21 per 1,000 of strength. *Eruptive fevers* account for 36 of the cases, or 3.8 per 1,000, somewhat less frequent than in the previous year; measles caused 22 of the cases and scarlet fever 11. *Enteric fever* caused 4 attacks and 2 deaths, one of the cases occurred in Dublin, one at Naas (fatal), one at Fermoy, and one at the Curragh, the last-named was also fatal. *Other continued fevers* show 89 cases of illness, one of which was a case of typhus fever reported from Tralee. *Dysentery* was the cause of 4 attacks, and *other diseases* of this group 12, one of which was a

case of diphtheria, occurring at Aldershot, the remainder being chiefly cases of influenza and mumps. United Kingdom.

Malarial Fevers caused 30 attacks, all ague, scattered over many stations; the ratio per 1,000, 3·2, shows a decline as compared with the preceding year.

Septic diseases show 22 attacks of illness; 16 of them were cases of erysipelas, all of which did well; the remainder were cases of pyæmia or septicæmia, and one death is recorded from the latter disease. *Venereal diseases* show 7 admissions for secondary syphilis, and the succeeding group of diseases is represented by a few cases of *parasitic* affection and two of *alcoholism*. *Debility* shows a ratio of prevalence of 65·5 per 1,000, dependent on 195 cases, and one death is recorded under this head. The cases recorded in the previous year gave a ratio of 61·5 per 1,000.

Among the unclassified general diseases *rheumatism* was the most frequent illness, 195 cases being returned, 16 of which were rheumatic fever, from which one death occurred; the ratio of prevalence of rheumatic affections, 20·7 per 1,000, differs only fractionally from that in the preceding year. *Tubercular diseases* were the cause of 57 attacks of illness and 17 deaths, being in the ratios of 6·1 and 1·79 per 1,000 respectively as compared with 9·1 and 2·83 respectively in the preceding year. Tubercular disease of the lung was the affection causing all the deaths, and all the admissions but one. *Other diseases* of this group show 73 attacks of illness, among which are observed 57 cases of anæmia, 6 of scrofula, 3 of non-malignant tumour, 4 of malignant disease, and 2 of diabetes. Three deaths are recorded, two from cancer and one from anæmia.

Local Diseases.—179 attacks of illness and 4 deaths are recorded from diseases of the nervous system, being in the ratios of 18·9 and ·43 per 1,000 respectively, as compared with 21·2 and ·22 per 1,000 in the preceding year. Three fourths of the attacks were due to neuralgia, several to epilepsy or hysterical affections, and three to mental disease. The deaths were due to encephalitis, white softening of the brain, paralysis, and general paralysis of the insane.

Diseases of the Eye were less prevalent than in the previous year, the ratio was 3·4 per 1,000, the cases were chiefly mild conjunctivitis.

Diseases of the Circulatory System gave a ratio of prevalence of 4·2 per 1,000, having declined from 5·0. Out of 40 attacks 15 were for palpitation and 13 for valvular disease of the heart.

Diseases of the Respiratory System caused 730 attacks of illness and 17 deaths, being in the ratios of 77·3 and 1·79 per 1,000 respectively, as compared with 68·0 and 1·25 per 1,000 in the preceding year. Over five sixths of the attacks were due to bronchial affections and of the remainder 31 were cases of pneumonia, 28 of pleurisy, and 25 of pneumonic phthisis. The causes of death are returned as follows: pneumonic phthisis 9 cases, pneumonia 4, bronchitis 3, and laryngitis 1 case.

Disease of the Digestive System.—The attacks of illness in this order were also numerous and reached 781, equal to a ratio of 82·7 per 1,000, which, however, is lower than that in the preceding year by 11·1. There were three deaths, which give a mortality rate of ·32 per 1,000, as compared with 1·36 in 1885. The most prevalent diseases were affections of the mouth, throat, and tonsils, and dyspepsia, and comprised more than two thirds of the total number of cases. Among the other cases were 82 of diarrhœa, 36 of hepatic disease, and 10 of peritonitis. The deaths were caused by peritonitis in two instances and by hepatitis in one.

Under *Diseases of the Lymphatic and Glandular System* 18 cases are recorded, of which 6 were returned as goitre, 2 as enlargement of the spleen, 1 case being fatal, and the remainder inflammation or suppuration of glands. *Diseases of the Urinary System* also caused a few attacks of illness, 21, rather more than in the previous year. Among the cases were five of Bright's disease, three of which proved fatal. *Diseases of the Generative System*, as in previous years, caused a large amount of sickness; the number of cases was 427, equal to a ratio of 45·2 per 1,000; in the previous year the corresponding rate was 38·4. There were 11 deaths, giving a mortality rate of 1·16 per 1,000, which is an increase of ·48 per 1,000. Among the cases recorded were 109 of abortion, 36 of metritis, 18 of premature labour, 21 of hæmorrhage, 18 of uterine

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displacements, and various others. The causes of death are thus recorded: puerperal septicæmia 3 cases, pelvic cellulitis 2 cases, parturition 2 cases, and metritis, placenta prævia, premature labour, and sudden death, one case respectively.

The amount of sickness in the remaining orders of local diseases was not great, and the ratios of prevalence differ very slightly from those recorded in the previous year.

Injuries.—56 cases of injury are returned, equal to 5·9 per 1,000, fractionally higher than in the preceding year. The injuries were mostly contusions and sprains of a slight nature, there were, however, five cases of fracture, one of dislocation, and one fatal case of compression of the brain.

CHILDREN.—The average strength of children as calculated from the Annual Returns was 17,364; the admissions into hospital numbered 8,100, and there were 534 deaths. The ratio of prevalence of sickness, therefore, equalled 466·5, and that of mortality 30·75 per 1,000, the former being increased by 17·8 and the latter by 5·18 as compared with the corresponding ratios in the preceding year.

General Diseases.—*Specific Febrile Diseases.*—Under sub-group 1, 2,446 attacks of sickness and 97 deaths are returned, being in the ratios of 140·9 and 5·58 per 1,000 respectively. *Eruptive fevers* caused 1,656 attacks and 66 deaths, the respective ratios being 95·3 and 3·80 per 1,000, as compared with 98·0 and 2·73 in the preceding year. There were two cases of small-pox, one at Woolwich, which recovered, and one at Winchester, which proved fatal. Measles was very prevalent, the ratio being 76·8 per 1,000 which is, however, slightly below the rate in the previous year. Mortality, on the other hand, from this disease has increased, the number of deaths, 56, giving a ratio of 3·22 as compared with 1·92 in 1885. Scarlet fever caused a rate of prevalence of 10·9 per 1,000, an increase of 2·6, and a rate of mortality of ·52 per 1,000, a decline of ·16. Every district suffered from measles, principally the Southern, Northern, Woolwich, and Aldershot districts; but with regard to scarlet fever three districts, the Eastern, Woolwich, and the Curragh escaped.

Enteric fever caused 12 cases and 1 death as compared with 16 cases and 2 deaths in the preceding year. Two of the cases occurred at Portsmouth, two in London, and two at Fermoy, and one case at Leeds, Manchester, Shoburness, Dublin, Cork, and Jersey, respectively; the case at Manchester proved fatal. *Other Continued Fevers* caused a ratio of prevalence of 11·1 per 1,000, which is lower than in the preceding year by 5·0. Three deaths, equal to ·17 per 1,000, are recorded. 15 attacks of *dysentery* are shown under this sub-group, and there were also two deaths from this disease.

Other diseases numbered 571 cases and 25 deaths, being in the ratios of 32·9 and 1·44 per 1,000. The great majority of these were whooping cough, which alone caused 450 cases and 21 deaths. The ratios of prevalence and mortality from this disease were 25·9 and 1·21 per 1,000 respectively, which are considerably above the corresponding rates for the preceding year. Diphtheria shows 28 attacks and four deaths; in the foregoing year the number of attacks was the same, but there was one death less. 19 cases and two deaths occurred in Aldershot; it is said that the cases were not generally severe in character; six cases occurred in one family, no particular defect in sanitation was discoverable in the hut or its vicinity. The more severe cases originated it is said in the North camp. In the month of October a sharp outbreak took place at Sandhurst among the families of officers and civilians, but no children belonging to soldiers' families were attacked. A full report of this outbreak by Brigade Surgeon A. Clarke was published in the Departmental Volume for 1885. The disease was traced to milk supplied from one dairy farm.

Under the head of *malarial fevers* are recorded 13 cases of ague and one death; and under *septic diseases*, 16 cases of erysipelas and one death. In sub-group 4 are shown 18 cases and 6 deaths, due to hereditary or congenital *syphilis*; in the preceding year 15 cases and 5 deaths were recorded.

Parasitic diseases numbered 93 cases due to various causes, and one death resulted from a cause of this nature.

Under the group of diseases of development, are returned 388 cases and 63 deaths, being in the ratios of 22·3 and 3·63 per 1,000 respectively. Of the

total number of cases, 368 and 48 deaths are returned as debility, and the *United Kingdom* remainder malformations or immaturity at birth, by which 15 deaths were caused.

In the unclassified group of general diseases, *rheumatism* shows 34 cases of illness, of which 13 were rheumatic fever, but no death resulted. *Tubercular diseases* caused 61 attacks and 37 deaths, the ratios per 1,000 being 3·5 and 2·13 respectively, which compare very favorably with those of the preceding year, which were 8·0 and 2·42. *Other diseases* of this group show 93 cases and 6 deaths, equal to 5·4 and ·34 per 1,000 respectively. Most of the cases were of a scrofulous or anæmic character, and these affections were the cause of the fatal cases.

Local Diseases.—A large amount of sickness and mortality was due to diseases of the nervous system, 270 attacks of illness and 98 deaths being recorded. The ratio of prevalence was, therefore, 15·5, and that of mortality 5·64 per 1,000, as compared with 13·3 and 5·03 respectively. 158 of the attacks of illness and 75 of the deaths were due to convulsions, meningitis caused 32 cases and 18 deaths, and hydrocephalus 10 cases and 4 deaths. The remaining cases were principally due to neuralgia or chorea.

Ophthalmic affections gave a ratio of prevalence equal to 8·5 per 1,000, and diseases of other organs of special sense 2·0 per 1,000, both being higher than in the preceding year.

As observed in other years, the attacks of illness due to diseases of the circulatory system were very few and numbered 15 only, of which 9 were cases of valvular disease of the heart, two of them being fatal.

Diseases of the Respiratory System, on the contrary, were very numerous, the attacks of illness being 2,183 in number, and the deaths 142, being in the ratios of 125·7 and 8·17 per 1,000 respectively, which, however, differ very slightly from the corresponding rates in the previous year. Over 2,000 of the cases were bronchial affections, among which were 113 deaths; pneumonia caused 84 cases and 18 deaths, croup 41 and 9 deaths, and pleurisy and pneumonic phthisis each 5 cases and one death.

Diseases of the Digestive System were also frequent, the attacks of illness, 1,260, and deaths 67, giving ratios of 72·6 and 3·86 per 1,000 respectively, which, like those of the previous order, differ but little from the corresponding ratios recorded in 1885. The diseases causing most sickness were diarrhoea, teething, dyspepsia, and affections of the mouth and throat. The following were the causes of death: diarrhoea 37 cases, teething 9, enteritis 7, gastric affections 3, quinsy and sore throat 4, intestinal obstruction and peritonitis 2 each, and jaundice, hernia, and colic one case respectively.

There was very little sickness from diseases of the *lymphatic* and *urinary systems* or from affections of the *organs of locomotion*. Diseases of the *connective tissue* caused a rate of prevalence of 5·6 per 1,000, and affections of the *skin* one of 32·2 per 1,000, both these being somewhat in excess of the corresponding rates in the preceding year. Eczema and the different varieties of *tinea* were the most prevalent diseases of the latter order.

Under the head of *poisons* is recorded only a single case, one of poisoning by a species of crowfoot, which proved fatal.

Injuries were 271 in number, and there were 12 deaths from such causes; the ratios of prevalence and mortality are 15·6 and ·69 per 1,000, both higher than in the preceding year. The most frequent injuries were wounds, burns, and scalds, contusions and fractures; it is observed that burns are relatively far more frequent among children than among adults, males as well as females. The fatal cases were 5 of burns or scalds, either general or local, 4 of asphyxia from overlying, one of asphyxia from strangulation during labour, one of asphyxia from plugging of the air passages, and one from drowning.

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VACCINATION.

The following table shows the conditions as to vaccination of all recruits found fit for the service during the year, together with the proportion per 1,000 of each condition :—

1886.	Number of Recruits found fit for the Service.	Proportion per 1,000.
Had marks of vaccination - -	39,130	929
Had marks of small-pox - -	1,078	25
Had neither marks of vaccination nor of small-pox - - - }	1,930	46
Total - - -	42,138	1,000

Compared with the corresponding return for the previous year an increase of 7 per 1,000 is observed among recruits who bore marks of vaccination before enlistment, also an increase of 2 per 1,000 among those bearing marks of small-pox, but a decrease of 9 per 1,000 has occurred among those bearing neither marks of small-pox nor of vaccination.

The following tables, compiled from the annual returns of Principal Medical Officers of districts, show the number of vaccinations performed during the year, with the proportions per 1,000 of successful or modified results or of failures, whether vaccinated with fresh or preserved lymph.

Results.	Vaccinated during the year.						Proportion per 1,000.					
	Arm to Arm.		From Preserved Lymph.		Total.		Arm to Arm.		From Preserved Lymph.		Total.	
	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.
TABLE I.—Recruits.												
Perfect vaccine pustules	93	5,755	327	12,532	420	17,987	726.6	469.4	579.3	440.1	606.9	464.8
Modified vaccine pustules	15	3,532	86	7,004	101	10,566	117.2	309.1	152.5	237.7	146.0	273.0
Failures	20	2,206	151	7,942	171	10,148	156.2	191.5	297.7	292.2	247.1	263.2
Total	128	11,523	564	27,178	692	38,701	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
TABLE II.—Soldiers other than Recruits.												
Perfect vaccine pustules	—	323	14	551	14	874	—	384.5	638.4	429.5	608.7	411.7
Modified vaccine pustules	—	375	1	274	1	649	—	446.4	45.4	213.6	43.5	503.7
Failures	1	142	7	458	8	600	1,000.0	169.1	318.2	356.9	347.8	232.6
Total	1	840	22	1,283	23	2,123	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
TABLE III.—Soldiers and Recruits.												
Perfect vaccine pustules	53	6,078	341	12,783	434	18,861	720.9	491.6	581.9	449.1	607.0	462.0
Modified vaccine pustules	15	3,937	87	7,278	102	11,215	116.3	318.5	148.5	245.7	142.6	274.7
Failures	21	2,348	158	8,400	179	10,748	162.8	189.9	269.6	295.2	250.4	263.3
Total	129	12,363	586	28,461	715	40,824	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0

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The first table shows the vaccinations performed on recruits only, the second those on soldiers other than recruits, and the third the total amount of vaccination among soldiers, comprising both the foregoing tables.

The total number of men vaccinated during the year was 41,539, being greater than that in the preceding year by 4,210. The number of recruits vaccinated was 39,393, and the number of soldiers, other than recruits, 2,146, as compared with 36,263 and 1,066 respectively.

The number of recruits found fit for the service was 42,138; it would appear, therefore, that the vaccination of 2,745 recruits is not accounted for. This however, is explained by the fact that some recruits who joined from the Militia, were satisfactorily vaccinated while in that force, and did not require re-vaccination on joining the regular army; there were also some recruits who enlisted late in the year whose vaccination will appear in the returns of the following year; and there were also certain instances of desertion before vaccination could be carried out.

Examining into the results of vaccination of recruits as shown in Table I., and comparing them with those recorded in the preceding year, it is observed that a decrease of 82·8 per 1,000 in the proportion of modified vaccine pustules has taken place in arm to arm primary vaccination, but there is an increase of 23·2 per 1,000 in the proportion of perfect vaccine pustules, and one of 59·6 in the proportion of failures. In arm to arm re-vaccination there is a decrease of 34·5 per 1,000 in perfect results, but an increase of 9·9 and 24·6 in modified results and failures respectively.

In primary vaccination with preserved lymph the proportion of perfect results has increased by 39·9 per 1,000, the proportion of modified pustules has decreased by 64·3, and that of failures increased by 24·4. In re-vaccination with preserved lymph a decrease of 32·0 per 1,000 is observed in modified results, being counterbalanced by an increase of 13·0 and 19·0 respectively in the proportions of perfect results and of failures.

The total results of vaccination among recruits show that in primary vaccination there has been an increase in the proportion of perfect vaccine pustules equal to 29·6 per 1,000, and in that of failures one of 37·3, but in the proportion of modified vaccine pustules there has been a decrease of 66·9. In re-vaccination it is seen that scarcely any change has taken place in the proportion of perfect results, but in modified results there is a decline of 19·5, and in failures an increase of 20·6 per 1,000.

Table II. shows that among soldiers, other than recruits, primary vaccination was performed in very few instances either directly from arm to arm or with preserved lymph. In arm to arm re-vaccination it was performed in 840 instances with the result that there was a decline of 7·8 per 1,000 in the proportion of perfect results, and of 72·8 in that of failures, but the increase in modified results amounts to 80·6. In re-vaccination with preserved lymph an increase in perfect results and failures occurred of 15·4 and 75·9 per 1,000 respectively, but modified results declined by 91·3. Taking both forms of re-vaccination together, however, the differences are not so marked, there being an increase of 4·9 per 1,000 only in the proportion of perfect vaccine pustules, and one of 14·8 in that of failures, the decline in modified results being only 19·7.

In Table III. the total results of primary vaccination among all classes of soldiers is as follows:—An increase of 27·5 per 1,000 in the proportion of perfect vaccine vesicles, a decrease of 72·7 in that of modified results, and an increase of 45·2 in that of failures. In re-vaccination there is a slight decline in the proportion of perfect results, one of 18·7 per 1,000 in that of modified results, and an increase of 21·0.

Out of 41,539 operations among soldiers perfect results were obtained in 19,295 instances, or in the proportion of 464·5 per 1,000, modified results in 11,317, or 272·4 per 1,000, while 10,927, or 263·1 per 1,000, were failures.

Women.—Primary vaccination was performed in only 23 instances, and re-vaccination in 104; of the latter the results were at the rate of 490·4 perfect vesicles, 336·5 modified vesicles, and 173·1 failures per 1,000 operations. Compared with the returns for the previous year an increase of modified results is observed equal to 148·0 per 1,000 and one of failures equal to 25·5; this

decline in perfect results, therefore, equals 173·5 per 1,000, but, as is shown above, the numbers on which these ratios are founded are small. *United Kingdom.*

Children.—1,517 arm to arm primary vaccinations are recorded, of which 1,424 gave perfect results, or in the proportion of 938·7 per 1,000, which, however, is lower by 38·3 than in the previous year, the proportion of failures being increased by the same amount. There were only 29 arm to arm re-vaccinations, all but 2 being successful, the proportion per 1,000 being 931·0, an increase on that in the preceding year.

Primary vaccination with preserved lymph was performed in 1,481 cases, of which 210 were failures, the proportion of perfect results was therefore 858·2 per 1,000, an increase of 18·5 on the rate recorded in the previous year. Re-vaccinations with preserved lymph were 121 in number, 92, or 760·3 per 1,000, being successful; this proportion, however, shows a decline of 148·8.

The number of operations of both forms of primary vaccination was 2,998 of which 2,695, or 898·9 per 1,000, gave perfect results; this proportion is, however, lower by 14·1 than in the preceding year. Out of 150 cases of both forms of re-vaccination 119, or 793·3 per 1,000, were successful, but this is also a lower proportion than in the last return.

The total number of vaccinations among children amounted to 3,148, among which perfect results were obtained in 2,814 instances, or in the proportion of 893·9 as compared with 912·6 per 1,000 in the preceding year.

Small-pox.—In the United Kingdom there were 11 cases, but no deaths among men, no cases among women, and 2 cases, one of which was fatal, among children. In the Colonies no cases occurred either amongst men, women, or children. In India there were 22 cases and 1 death among men, 4 cases and no deaths among women, and 23 cases with 2 deaths among children. In Egypt there were 51 cases with 3 deaths among men; 2 cases, recoveries, among women; and 4 cases with no deaths among children.

The total numbers are 84 cases and 4 deaths among men, 6 cases and no deaths among women, and 29 cases and 3 deaths among children. The ratios of attacks to strength are, for men, 44 per 1,000; for women, 42 per 1,000; and for children, 1·10 per 1,000; and the ratios of mortality to strength are, for men, 02 per 1,000; for women, *nil*; and for children, 11 per 1,000.

On the Influence of Age on the Mortality of the Troops serving in the United Kingdom.

The rates of mortality at different ages (arranged in quinquennial periods), in the several arms of the service, are shown in the following table:—

Arms of the Service.	Annual Ratio of Deaths per 1,000 Living at the following Ages:—					
	Under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and up- wards.
Household Cavalry - -	—	3·95	2·74	17·96	—	—
Cavalry - - -	1·38	4·28	4·62	8·03	12·29	21·43
Royal Artillery - - -	6·12	5·23	8·85	11·45	13·28	29·37
Royal Engineers - - -	3·97	2·93	4·76	4·74	—	19·48
Foot Guards - - -	3·19	4·55	2·57	13·84	22·60	14·49
Infantry - - -	3·48	5·33	6·73	9·48	9·21	15·40
Regimental Depôts - -	4·98	7·90	7·90	13·08	17·15	30·38
Garrison, Staff, and Depart- mental Corps.	2·66	5·59	16·05	8·62	32·03	101·26
Average of all Troops at Home	3·87	5·29	7·08	10·46	12·79	25·11
Ditto ditto 1876-85	3·10	4·78	6·19	9·79	14·97	22·86

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On the Recruiting of the Army.

The number of recruits inspected during the year, as gathered from the Annual Returns of Principal Medical Officers of districts, was 74,991; of these 42,138 were found fit for service, and 32,853 were rejected as unfit, being in the ratios of 561·91 and 438·09 per 1,000 respectively.

Of the total number of recruits inspected 62,658 were examined by Army Medical Officers only, 35,035 of these were found fit for service, being in the ratio of 559·15 per 1,000, and 27,623, or 440·85 per 1,000, were rejected as unfit.

The rest of the total number inspected, 12,333, were primarily examined by Civil Medical Practitioners, and 2,560, or 207·57 per 1,000, were then rejected by them, the remainder being referred to Army Medical Officers for secondary inspection, with the result that 2,297 more men, or 186·25 per 1,000, were rejected, leaving 7,476 men, or 606·18 per 1,000, as approved.

To the total number of rejections thus obtained must be added those of 373 recruits, who were found medically unfit for service within three months of their enlistment under Section XIX., paragraph 227 (d), Queen's Regulations and Orders for the Army, 1885.

As compared with the return for the previous year the total proportion of men passed fit for the service is less by 37·63 per 1,000, the total proportion of rejections being consequently greater by the same amount.

The following table shows the number inspected, the number rejected, and the ratios of rejections per 1,000 examined :—

TABLE I.

Examined by	Number of Recruits Inspected.	Number Rejected				Total found fit for service.
		On Inspection.	On Secondary Inspection by Army Medical Officers.	Unfit within three months of enlistment.	Total Rejected.	
Army Medical Officers -	62,658	27,623	—	} 373	32,853	42,138
Civil Medical Practitioners -	12,333	2,560	2,297			
Total -	74,991	30,183	2,297	373	32,853	42,138

Examined by	Ratio of Rejections per 1,000 inspected.				Ratio of those found fit per 1,000 Inspected.
	On Inspection.	On Secondary Inspection by Army Medical Officers.	Unfit within three months of enlistment.	Total Rejected.	
Army Medical Officers -	440·85	—	} 4·97	438·09	561·91
Civil Medical Practitioners -	207·57	186·25			
Total -	402·49	186·25	4·97	438·09	561·91

Compared with the corresponding ratios in the preceding year an increase of 40·96 per 1,000 has taken place in the proportion of rejections of recruits inspected by Army Medical Officers only, one of 9·12 in the proportion of rejections of recruits primarily inspected by Civil Medical Practitioners, one of 1·32 in that of recruits secondarily inspected by medical officers, and one of 1·13 per 1,000 in the proportion of rejections of recruits within three months of enlistment.

The native countries of recruits, the ratios of rejections, and the proportion per 1,000 furnished by each country are given in the following table:— *United Kingdom.*

TABLE II.

Native Countries of Recruits.	Examined by Army Medical Officers.		Primarily Examined by Civil Medical Practitioners.		Rejected on Secondary Inspection.	Unfit within three months of enlistment.	Total.		Ratio Rejected per 1,000 Inspected.	Proportion per 1,000 Recruits furnished by each Country.
	Inspected.	Rejected.	Inspected.	Rejected.			Primarily Inspected.	Rejected at Primary and Secondary Inspections and as unfit within three months of enlistment.		
England and Wales	46,987	21,354	9,928	2,283	1,876	270	56,815	25,783	453.80	758
Scotland - -	6,051	2,669	895	48	193	38	6,946	2,848	410.02	92
Ireland - -	8,963	3,444	1,440	324	217	63	10,403	3,948	379.50	139
British Colonies and Foreign Countries	757	256	69	4	11	2	826	273	330.51	11
Not stated -	—	—	1	1	—	—	1	1	—	—
Total -	62,658	27,623	12,333	2,560	2,297	373	74,901	32,853	438.09	1,000

Compared with the returns for the preceding year it is observed that an increase has taken place in the ratio of rejections of recruits from all the different countries, being 42.84 per 1,000 of those born in England and Wales, 38.48 of those born in Scotland, 11.77 of those born in Ireland, and 1.49 per 1,000 of those born in British Colonies or foreign countries. The proportion per 1,000 recruits who were natives of England and Wales was 758, which is higher by 1 than the preceding year, the proportion born in Ireland was 139, which is higher by 5, and the proportion of those born in British Colonies or foreign countries was 11, an increase of 1, while the proportion furnished by Scotland, 92, is lower by 7 than in the preceding year.

The next table gives, among 65,287 recruits inspected, the number examined for each arm of the service, the number rejected, the ratios of rejections, and the proportion for each arm of the service per 1,000 inspected. For the balance, 9,704, of the total number of recruits inspected information is not available, as they are shown in the returns as inspected for general service, the particular arm of the service not being stated:—

TABLE III.

Arms of the Service.	Examined by Army Medical Officers.		Primarily Examined by Civil Medical Practitioners.		Unfit within three months of enlistment.	Total.		Ratio of Rejections per 1,000 of Recruits inspected for each Arm of the Service.	Proportion for each Arm of the Service per 1,000 inspected.
	Inspected.	Rejected.	Inspected.	Rejected at primary Inspection.		Inspected.	Rejected.		
Household Cavalry -	378	168	13	1	2	7	389	457.58	6
Cavalry of the Line -	4,913	2,023	1,072	225	203	55	5,895	418.71	92
Royal Artillery -	6,184	2,324	1,895	381	350	72	8,179	383.54	125
Royal Engineers -	1,224	454	218	23	38	6	1,442	364.77	22
Foot Guards -	1,362	523	386	67	74	21	1,738	394.13	27
Infantry Regiments -	37,486	16,789	8,366	1,794	1,583	210	45,851	444.39	702
Departmental Corps	1,515	631	188	54	39	2	1,703	426.51	26
Total -	53,062	22,912	12,235	2,560	2,289	373	65,287	430.93	1,000

Comparing the above table with that for the preceding year an increase in the ratio of rejection of recruits is observed in each arm of the service amounting to 71.54 per 1,000 inspected in the Household Cavalry, 15.97 in

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the Cavalry, 17·84 in the Artillery, 39·35 in the Engineers, 79·88 in the Foot Guards, 40·15 in the Infantry, and 52·76 in Departmental Corps. The proportion of recruits for each arm of the service out of every 1,000 inspected does not show a marked difference in any instance as compared with the return for the preceding year. In the Cavalry an increase of 13 has occurred, and in Departmental Corps an increase of one, while in the Foot Guards, Engineers, Household Cavalry, and Infantry a decrease of 8, 3, 2 and 1 respectively is observed; in the Artillery no change occurred.

In the next table are given the occupations of recruits previous to enlistment, the ratio rejected per 1,000 in each group of occupations, and the proportion of each group in every 1,000 recruits inspected:—

TABLE IV.

Occupations of Recruits.	Number Inspected.	Number Rejected.	Ratio Rejected per 1,000 Inspected.	Proportion of each Group in 1,000 recruits Inspected.
1. Labourers, Servants, Husbandmen, &c.	47,517	20,737	436·41	634
2. Manufacturing Artizans (as Clothworkers, Weavers, Lace Makers, &c.).	11,702	5,644	482·31	156
3. Mechanics employed in Occupations favorable to physical development (as Smiths, Carpenters, Masons, &c.).	9,062	3,973	438·42	121
4. Shopmen and Clerks - -	4,282	1,853	432·74	57
5. Professional Occupations, Students, &c.	924	365	395·02	12
6. Boys under 17 years of age -	1,492	274	183·05	20
Not stated - - -	12	7	583·33	—
Total - - -	74,991	32,853	438·09	1,000

In comparison with the return of the previous year an increase is observed in the ratio of rejections of recruits in all the classes of occupations, amounting to 38·15 per 1,000 in Class 1, labourers, &c., 49·09 in Class 2, manufacturing artizans, 24·31; in Class 3, mechanics employed in occupations favourable to physical development; 24·05 in Class 4, shopmen and clerks; 94·20 in Class 5, professional occupations, and 48·62 per 1,000 in Class 6, boys under 17 years of age.

Out of every 1,000 recruits inspected 634 were of Class 1, labourers, a decrease of 7 as compared with the previous year; 156 were of Class 2, manufacturing artizans, an increase of 11; 121 were of Class 3, mechanics, being lower by 13; 57 were of Class 4, shopmen and clerks, being higher by 3; 12 men of Class 5, professional occupations, an increase of 4; and 20 were of Class 6, boys under 17 years of age, an increase of 2.

The state of education of 72,431 of the recruits inspected is given in the succeeding table, for the remainder, 2,560, of the total number inspected no information on this subject is forthcoming:—

TABLE V.

—	Numbers Inspected.	Proportion per 1,000.
Well educated - - -	5,086	70
Able to read and write - - -	57,644	796
Able to read only - - -	4,089	56
Unable to read - - -	5,612	78
Total - - -	72,431	1,000

Compared with last year's return a decrease of 2 is observed in the proportion of recruits per 1,000 who are classed as well educated, and there is a decrease of 30 and 12 respectively among those able to read only, and those unable to read, but there is an increase of 44 in the proportion of those able to read and write.

Table No. 6 shows the number of recruits rejected in 1886, with the causes of rejections arranged in classes, and the ratio per 1,000 in each class.

TABLE VI.

Causes of Rejections, in Classes.	Examined by Army Medical Officers.		Examined by Civil Medical Practitioners.				Unfit within first three months of service.	Total examined.	
	62,653		12,333					74,991	
	Num- ber Re- jected.	Ratio per 1,000 Re- jected.	Number Rejected by Civil Medical Practi- tioners at Primary Inspection.	Ratio per 1,000 Rejected.	Number Rejected by Army Medical Officers at Secondary Inspection.	Ratio per 1,000 Rejected.		Total Num- ber Re- jected.	Ratio per 1,000 Re- jected.
1. Syphilis - - -	457	7.29	114	9.24	41	3.32	1	613	8.18
2. Scrofula - - -	169	2.70	34	2.76	18	1.46	2	223	2.97
3. Phthisis - - -	79	1.26	51	4.14	7	.57	10	147	1.96
4. Impaired Constitution	270	4.81	28	2.27	27	2.19	3	328	4.37
5. Other General Diseases	155	2.47	95	7.70	14	1.14	9	273	3.64
6. Diseases of Nervous System.	24	.38	4	.32	10	.81	25	63	.84
7. Weakness of Intellect -	115	1.84	13	1.06	29	2.35	59	216	2.88
8. Defective Vision - -	2,721	43.43	243	19.70	209	16.95	7	3,180	42.41
9. Diseases of Eyes and Eyelids.	111	1.77	26	2.11	11	.89	8	156	2.08
10. Diseases of Nose and Mouth.	50	.80	6	.40	3	.24	—	59	.79
11. Disease of Ears - -	31	.40	3	.24	10	.81	8	52	.69
12. Deafness - - -	66	1.05	2	.16	6	.49	2	76	1.01
13. Impediment of Speech	112	1.79	7	.57	7	.57	1	127	1.70
14. Disease of Heart - -	1,138	18.16	213	17.27	91	7.38	26	1,468	19.58
15. Disease of Arteries (Aneurism).	15	.24	4	.32	3	.24	—	22	.29
16. Disease of Veins (Varix)	1,128	18.00	153	12.41	72	5.84	7	1,360	18.14
17. Disease of Lungs (ex- cept Phthisis).	62	.90	22	1.78	3	.24	4	91	1.21
18. Loss or Decay of many Teeth.	609	9.72	90	8.03	62	5.03	4	774	10.32
19. Hernia - - -	431	6.88	78	6.32	39	3.16	27	575	7.67
20. Laxity of Abdominal Rings	126	2.01	6	.49	5	.41	—	137	1.83
21. Hemorrhoids - - -	89	1.42	30	2.43	11	.89	—	130	1.73
22. Diseases of the Urinary Organs.	18	.29	55	4.46	3	.24	4	80	1.07
23. Varicocele - - -	903	15.83	251	20.35	65	5.27	16	1,330	17.74
24. Other Diseases of the Genital Organs (not Syphilitic).	108	1.72	26	2.11	5	.41	3	142	1.89
25. Defects of Upper Ex- tremities, from Frac- ture, Contraction, Luxation, &c.	277	4.42	34	2.76	61	4.95	9	381	5.08
26. Defects of Lower Ex- tremities, from Frac- ture, Contraction, Luxation, &c.	764	12.19	101	8.19	89	7.22	14	968	12.91
27. Flat Feet - - -	571	9.11	65	5.27	59	4.78	6	701	9.35
28. Diseases of Joints - -	158	2.52	6	.49	23	1.86	2	189	2.49
29. Other Affections of Bones and Muscles.	132	2.11	9	.73	7	.57	2	150	2.00
30. Ulcers, Wounds, and Cicatrices.	137	2.19	27	2.19	23	1.86	4	191	2.55
31. Other Affections of the Cutaneous System.	243	3.88	84	6.81	32	2.59	2	361	4.81
32. Malformation of Ears -	29	.46	—	—	1	.08	—	30	.40
33. Malformation of Nose and Mouth.	6	.10	—	—	4	.33	—	10	.13
34. Malformation of Chest and Spine.	452	7.21	126	10.22	36	2.92	6	620	8.27
35. Malformation of Urin- ary or Genital Organs.	35	.56	4	.32	7	.57	1	47	.63
36. Marks of Punishment, or of letter D. or B.C.	2	.03	—	—	—	—	—	2	.03
37. Under Height - - -	1,927	30.76	36	2.92	164	13.30	11	2,138	28.51
38. Under Chest Measure- ment.	9,282	148.14	192	15.57	590	47.84	68	10,132	135.11
39. Under Weight (Mus- cular Tenuity and Debility).	3,447	55.01	287	23.27	307	24.89	21	4,062	54.17
40. Apparent Age not in accordance with Gene- ral Order.	822	13.12	22	1.78	121	9.81	1	966	12.88
41. Not likely to become efficient.	250	3.99	4	.32	21	1.70	—	275	3.67
42. Over height - - -	7	.11	—	—	1	.08	—	8	.11
Total Rejected -	27,623	440.85	2,560	207.57	2,297	186.25	373	32,853	438.09

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The above return shows, as in previous years, that the causes of the highest ratios of rejections are defective vision, and those relating to development, under height, weight or chest measurement, the limits of which are laid down by regulation. The highest ratio of rejection was that for insufficient chest measurement and equalled 135·11 per 1,000 as compared with 100·58 in the preceding year; this is followed by "under weight," 54·17 per 1,000, "defective vision" 42·41, and "under height" 28·51 per 1,000, each of which is slightly higher than the corresponding ratio in the previous year. Among other causes of rejection those which caused high ratios were heart disease, 19·58 per 1,000, varicose condition of veins and varicocele, 18·14 and 17·74 per 1,000 respectively, and defects of lower extremities 12·91 per 1,000. In none of these, or of the remaining causes of rejections, are there any marked differences in the ratios as compared with those recorded in the preceding year.

A considerable difference is noticed in the ratios of rejections of recruits for insufficient height, weight, and chest measurement when primarily examined by medical officers, and when examined by civil practitioners. The ratio of rejection by medical officers for insufficient height was 30·76, and that by civil practitioners only 2·92 per 1,000; the ratio of rejection for being under the required chest measurement was, by medical officers, 148·14, and by civil practitioners 15·57 per 1,000; and the ratio of rejection, for being "under weight" was 55·01 per 1,000 in the case of recruits examined by medical officers, and 23·27 in that of those examined by civil practitioners. In certain other instances also, such as defective vision, "apparent age not being in accordance with general order," considerable difference of ratio is observed in this comparison.

Ages, Heights, Weights, and Chest Measurements of Recruits Inspected.

In the subjoined table are shown the ages of all recruits as given at their primary inspection, and the proportion of each age per 10,000:—

TABLE VII.

Ages.				Numbers Inspected.	Proportion per 10,000.
Boys under 17 years -	-	-	-	1,535	204
From 17 to 18 „ -	-	-	-	1,611	215
„ 18 to 19 „ -	-	-	-	29,637	3,952
„ 19 to 20 „ -	-	-	-	16,536	2,205
„ 20 to 21 „ -	-	-	-	6,859	915
„ 21 to 22 „ -	-	-	-	5,387	712
„ 22 to 23 „ -	-	-	-	4,280	571
„ 23 to 24 „ -	-	-	-	3,953	527
„ 24 to 25 „ -	-	-	-	4,123	550
25 years and upwards	-	-	-	1,120	149
Total	-	-	-	74,991	10,000

Comparing this table with that of the preceding year, the proportion of recruits *United Kingdom.* inspected under 17 years of age has increased by 9, that between 17 and 18 years of age by 34, that between 18 and 19 years of age by 543, and that between 23 and 24 years of age by 25; but the proportion of recruits inspected between 19 and 20 years of age has decreased by 210, that between 20 and 21 years of age by 157, that between 21 and 22 years of age by 87, between 22 and 23 years of age by 66, between 24 and 25 years of age by 18, and over 25 years of age by 73.

The next table shows the heights of recruits at their inspection, and the proportion of each height per 10,000 inspected. It also gives the heights of recruits at their inspection, arranged in series according to age, together with the proportion per 10,000 of each height at each age:—

TABLE VIII.

Heights of Recruits on Inspection.			Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Totals at each Height	
ft. in.	ft. in.													
Under 5	3	-	1,282	80	482	152	30	21	15	13	6	3	2,084	
5	3 to 5	4	-	122	348	4,216	1,533	365	197	141	124	111	42	7,199
5	4 to 5	5	-	52	409	7,864	3,725	1,324	925	664	577	565	145	16,250
5	5 to 5	6	-	38	332	6,491	3,345	1,340	1,059	854	769	818	210	15,285
5	6 to 5	7	-	24	223	4,862	2,836	1,325	1,084	862	780	785	215	12,995
5	7 to 5	8	-	12	105	2,994	2,181	997	777	698	582	604	203	9,243
5	8 to 5	9	-	2	62	1,523	1,425	670	571	465	511	497	134	5,960
5	9 to 5	10	-	3	43	760	808	425	375	306	346	349	93	3,508
5	10 to 5	11	-	—	6	238	282	192	160	145	146	161	45	1,375
5	11 to 6	0	-	—	2	130	143	101	91	78	60	89	17	711
6	0 and upwards		—	1	77	107	81	77	52	45	48	13	501	
Totals at each age			1,535	1,611	29,037	16,536	6,859	5,337	4,280	3,953	4,123	1,120	74,991	

Heights of Recruits on Inspection.			Proportions per 10,000 at each Age.										Total Proportion of each Height per 10,000 inspected.	
			Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.		
ft. in.	ft. in.													
Under 5	3	-	8,352	497	163	92	44	39	35	33	15	27	278	
5	3 to 5	4	-	795	2,160	1,423	927	532	369	330	314	269	375	960
5	4 to 5	5	-	339	2,639	2,653	2,253	1,930	1,733	1,551	1,460	1,371	1,205	2,167
5	5 to 5	6	-	248	2,061	2,190	2,023	1,976	1,984	1,995	1,945	1,984	1,875	2,036
5	6 to 5	7	-	156	1,384	1,641	1,714	1,932	2,081	2,014	1,973	1,904	1,920	1,733
5	7 to 5	8	-	78	652	1,010	1,319	1,454	1,456	1,631	1,472	1,683	1,812	1,232
5	8 to 5	9	-	13	385	514	862	977	1,070	1,087	1,293	1,205	1,196	781
5	9 to 5	10	-	19	267	256	489	619	703	715	875	847	830	468
5	10 to 5	11	-	—	87	86	170	280	300	339	369	390	402	183
5	11 to 6	0	-	—	12	44	86	147	171	182	152	216	152	95
6	0 and upwards		—	6	26	65	118	144	121	114	116	116	67	
Total			-	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

United Kingdom.

Compared with the corresponding return for the preceding year a decrease is observed in the proportion of recruits per 10,000 inspected of 4 under 5 feet 3 inches in height, of 182 between 5 feet 3 inches and 5 feet 4 inches, of 28 between 5 feet 5 inches and 5 feet 6 inches, and of 1 between 5 feet 10 inches and 5 feet 11 inches; but an increase of 28 is observed in the proportion of recruits between 5 feet 4 inches and 5 feet 5 inches, one of 63 between 5 feet 6 inches and 5 feet 7 inches, of 53 between 5 feet 7 inches and 5 feet 8 inches, of 18 between 5 feet 8 inches and 5 feet 9 inches, of 42 between 5 feet 9 inches and 5 feet 10 inches, of 7 between 5 feet 11 inches and 6 feet, and of 4 of 6 feet and upwards.

Omitting boys, the highest proportion of recruits of any height at any age per 10,000 inspected was 2,653 between 18 and 19 years of age, and from 5 feet 4 inches to 5 feet 5 inches in height. In the previous year also, the highest proportion, 2454, based on a large number of inspections, was of recruits of the same age and at the same height.

The next table shows the weights of 72,431 recruits at their inspection, and the proportion of each weight per 10,000 inspected; it is not possible to give this information for the balance, 2,560, of the total number of recruits inspected, these being recruits primarily rejected by civil practitioners, whose weights are not recorded. The table also shows the weights of these recruits at their inspection, arranged in series according to age, together with the proportion per 10,000 of each weight at each age:—

TABLE IX.

Weights of Recruits on Inspection.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Totals at each Weight.
Under 100 lbs. -	1,269	13	46	8	—	—	—	1	2	—	1,339
100—110 lbs. -	156	141	1,383	344	76	38	83	22	9	4	2,206
110—120 „ -	73	738	10,658	3,769	949	480	421	321	210	77	17,781
120—130 „ -	29	484	10,363	5,893	2,080	1,551	1,074	916	951	238	23,579
130—140 „ -	2	174	4,496	3,733	1,903	1,508	1,206	1,148	1,182	318	15,729
140—150 „ -	—	50	1,302	1,550	1,010	903	823	816	808	264	7,616
150—160 „ -	—	6	326	430	430	429	378	364	445	131	2,939
160—170 „ -	—	—	82	125	130	113	132	148	191	54	975
Upwards of 170 lbs. -	—	—	20	33	32	46	36	59	79	22	327
Totals at each age	1,529	1,601	23,706	15,945	6,610	5,068	4,102	3,796	3,967	1,108	72,431

Weights of Recruits on Inspection.	Proportions per 10,000 at each Age.										Total Proportion of each Weight per 10,000 inspected.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 100 lbs. -	8,300	61	16	5	—	—	—	3	5	—	185
100—110 lbs. -	1,020	881	462	216	115	75	80	58	23	36	304
110—120 „ -	477	4,579	3,723	3,364	1,436	947	1,026	846	529	695	2,447
120—130 „ -	190	3,023	3,610	3,696	3,147	3,060	2,618	2,414	2,397	2,148	3,355
130—140 „ -	13	1,087	1,566	2,379	2,879	2,976	2,958	3,025	2,980	2,870	2,172
140—150 „ -	—	312	454	972	1,528	1,782	2,000	2,150	2,264	2,383	1,051
150—160 „ -	—	37	114	270	650	846	922	959	1,123	1,182	406
160—170 „ -	—	—	28	78	197	223	322	390	461	487	135
Upwards of 170 lbs. -	—	—	7	20	48	91	88	155	199	199	46
Totals at each age	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

United Kingdom.

Compared with the results in the preceding year, a decrease of 62 has occurred in the proportion of recruits per 10,000 inspected, between 100 lbs. and 110 lbs. in weight, and one of 73 in that of recruits between 120 lbs. and 130 lbs. in weight; on the other hand, an increase of 5 has taken place in the proportion of recruits per 10,000 inspected under 100 lbs. in weight, an increase of 52 in that of recruits between 110 lbs. and 120 lbs. in weight, one of 22 in recruits between 130 lbs. and 140 lbs., one of 36 in recruits between 140 lbs. and 150 lbs., of 12 in recruits between 150 lbs. and 160 lbs., of 6 in recruits between 160 lbs. and 170 lbs., and of 2 in the proportion of recruits over 170 lbs. in weight.

Omitting boys, the highest proportion of recruits of any weight at any age per 10,000 inspected is 4,579 between 17 and 18 years of age and between 110 lbs. and 120 lbs. in weight, but this proportion is based on a comparatively small number of inspections. The highest proportion dependent on a large number of inspections is 3,723 between 18 and 19 years of age, and between 110 and 120 lbs. in weight. In the preceding year the highest proportion was 3,958 between 19 and 20 years of age, and between 120 and 130 lbs. in weight.

The next table gives the chest measurements of recruits taken at their inspection, and the proportion of each measurement per 10,000 inspected. It also shows the chest measurements of recruits taken at their inspection arranged in series according to age, together with the proportion per 10,000 of each chest measurement at each age.

TABLE X.

Chest Measurement of Recruits on Inspection.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Chest Measurement.
Under 31 inches -	1,346	52	306	81	15	6	6	7	4	2	1,325
31—32 inches -	115	227	2,138	800	155	90	60	53	19	10	3,467
32—33 „ -	51	577	7,484	2,381	743	453	290	237	188	67	13,011
33—34 „ -	18	448	11,422	5,583	1,897	1,309	906	755	640	207	23,185
34—35 „ -	4	217	5,999	4,693	2,206	1,960	1,438	1,291	1,251	307	19,265
Above 35 inches -	1	90	2,288	2,648	1,844	1,618	1,580	1,620	2,021	527	14,237
Totals at each age	1,535	1,611	29,637	16,536	6,859	5,336	4,280	3,963	4,123	1,120	74,990

United
Kingdom.

Chest Measurement of Recruits on Inspection.	Proportions per 10,000 at each Age										Total proportion of each Chest Mea- surement per 10,000 inspected.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 31 inches -	8,769	323	103	40	22	11	14	18	10	18	243
31—32 inches -	740	1,409	722	363	226	169	140	134	46	89	463
32—33 " -	832	3,582	2,525	1,773	1,083	840	677	574	456	598	1,735
33—34 " -	117	2,781	3,854	3,376	2,766	2,453	2,117	1,910	1,552	1,848	3,092
34—35 " -	26	1,347	2,024	2,838	3,215	3,486	3,360	3,266	3,034	2,741	2,569
Above 35 inches -	7	558	772	1,601	2,688	3,032	3,692	4,984	4,902	4,706	1,899
Total -	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

In comparison with the return for the preceding year an increase of 6 has occurred in the proportion of recruits per 10,000 inspected under 31 inches chest measurement, one of 22 in the proportion of recruits between 32 inches and 33 inches chest measurement, and one of 59 in that of recruits between 33 inches and 34 inches chest measurement; but a decrease of 19 is observed in the proportion of recruits between 31 inches and 32 inches chest measurement, one of 58 in the proportion of recruits between 34 and 35 inches chest measurement, and one of 10 in that of recruits over 35 inches chest measurement.

Omitting boys, the highest proportion of recruits of any chest measurement at any age per 10,000 inspected was 4,902 between 24 and 25 years of age and above 35 inches chest measurement, followed by 4,706 at the age of 25 years and upwards and over 35 inches chest measurement. In the previous year these proportions were in reverse order. Taking the ages at which the greatest number of recruits are inspected, the highest proportion recorded is 3,854 between 18 and 19 years of age, and 33 and 34 inches chest measurement. In the preceding year the corresponding proportion was also the highest.

From the foregoing tables it has been calculated that, excluding boys under 17 years of age, the average age of recruits at inspection during the year was 19·5 years, the average height 5 feet 5·6 inches, the average weight 123·3 lbs., and the average chest measurement 33·4 inches. Compared with corresponding observations for the preceding year, there is a very slight decrease in the average age of recruits, but an increase of an inch in their average height; also a fractional increase in their average weight; the average chest measurement, however, remained the same.

HOME STATIONS.

SANITARY CONDITIONS.

Northern District.

The Principal Medical Officer, Deputy Surgeon-General A. F. Bradshaw, reports that "according to the annual returns received from the several medical officers in charge, sedulous attention was paid throughout the year to sanitary arrangements in general; numerous improvements were effected, some of them worthy of particular notice, such as putting in proper repair the drains of Fleetwood barracks; enlarging the guard room at Lichfield, and regulating the surface drainage of the Leicester barrack grounds. Further advances in sanitation are desirable; for instance, the cells at Coventry are said to be unfit for occupation on account of the foundations being so persistently damp; the barrack hospital out-offices need remodelling, a work about to be undertaken; water supply (piped) and slop sinks are much wanted for certain quarters tenanted by soldiers' families; and in many hospitals alterations are required in the method of warming, as the ward stoves at present in use are found to be inadequate.

"Medical officers all agree in attributing to the vigilant sanitary supervision of men and barracks by the responsible officers the excellent health which the troops enjoyed in 1886. In only one instance brought to notice was illness ascribed to a sanitary defect, the occurrence of enteric fever at Fleetwood, due to defective drainage; but no further cases occurred after the necessary repairs had been executed.

"The success of careful attention to sanitary measures in lessening the risk to public health from unwholesome surroundings is believed to have been illustrated at Manchester, for instance. The barracks at Salford and Hulme are closely hemmed in by factories, chemical works, and dwelling-houses. Ordinarily the atmosphere is charged with smoke and with fumes noxious to vegetation also; rainfall is frequent. Nevertheless, these troops were very healthy; good shelter, ample food, sufficient clothing, satisfactory latrine and surface drainage, combined with disciplined daily life, retained the men in efficient condition and free from epidemic disease or serious extent of occasional illnesses."

With regard to general sanitary conditions the Principal Medical Officer remarks that the accommodation for the troops was not increased during the year; that the ventilation of barracks appears to have been satisfactory everywhere; that the facilities for ablution did not require increase, the existing arrangements sufficing. At some stations minor repairs in drainage were found to be necessary and were carried into effect. The rations for the troops were of the usual quality and demanded no alterations in scale, and the means of cooking were sufficient for variety. The clothing of the troops was suitable for the seasons and stations. With regard to gymnastic training it is stated to have proved distinctly beneficial wherever practised.

Eastern District.

The Principal Medical Officer, Deputy-Surgeon General T. W. Fox, reports that the general health of the troops during the year was good, and that the barracks and hospitals in the district were generally in good sanitary condition, the accommodation good and sufficient, ventilation satisfactory, as also drainage, conservancy, and means of ablution.

A considerable number of sanitary improvements were effected during the year, among which may be mentioned the following:

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At Colchester a disinfecting chamber was constructed at the station hospital, and two new detached wards for the treatment of infectious cases were erected. In barracks covers were supplied to water tanks, the main sewers were ventilated, and syphons fixed in drains from night urinals. The sinks in the officers' quarters in the cavalry barracks were disconnected from soil pipes and the urinal drains from sewers.

At Great Yarmouth the new South Denes barracks were opened for occupation. The South Town barracks are very old and defective, and will be vacated when the new barracks at Norwich are ready for occupation.

In consequence of the positions of the hospitals at Lincoln, Bury St. Edmunds, and Landguard Fort being exposed to the full force of the cold east winds it was found necessary to provide double sashes to the east windows of the hospital wards at these places. The same is proposed for the hospital and barracks at Great Yarmouth. The Principal Medical Officer is of opinion that it would be a great advantage if double sashes were provided to all the hospital windows exposed to the north and east, as they would materially aid in keeping up the temperature of the wards while saving an unusual expenditure of fuel. At Lincoln and Bedford some east windows have been blocked up in certain large barrack rooms, which were very cold and draughty; the rooms were thus made warmer and more comfortable.

At Ipswich new married soldiers' quarters are required, the old ones being defective and insufficient. New quarters for 16 families are proposed in the estimates.

The Principal Medical Officer states that a ward suitable for the treatment of insane patients is greatly needed at the station hospital, Colchester, which consists of old pattern huts quite unsuitable for this purpose.

Western District.

The acting Principal Medical Officer, Brigade-Surgeon H. C. Herbert, M.D., reports that the general health of the troops throughout the district was very good, that the various barracks were, on the whole, in a very satisfactory condition, and any minor defects which were noticed were at once reported to the proper authorities, usually with prompt results.

The medical officer at Brecon states that there was some diminution of the proper amount of cubic space during the later months of the year, due to the influx of recruits, and to the fact that some rooms were undergoing repairs; this, however, was unavoidable, and no unfavorable influence on health resulted.

At Devonport the barracks and station hospital are reported to have been in good sanitary condition, and no important change took place, except that in the latter re-appropriation of rooms as quarters for sick officers took place, as well as of some of the store-rooms as quarters, kitchens, &c., for the staff of nursing sisters appointed for duty in the hospital.

At Exeter no change in the buildings or accommodation of the troops took place during the year, and the medical officer reports that the barracks are well situated and their surroundings generally healthy, except in the case of the western side of the Higher barracks, where the married quarters adjoin a series of small yards at the back of a street of small houses densely inhabited. This objectionable condition has been brought to the notice of the authorities and a recommendation made that an 8 to 12 feet wall should be built to separate the married quarters from these houses. The station hospital is satisfactory and afforded sufficient accommodation, except during the militia training, when it was occasionally necessary to use a barrack room for the accommodation of the sick.

At Newport the sanitary conditions generally are very good, and it is said that the introduction of the water-closet system, both at the barracks and hospital, proved very satisfactory; the drainage generally is favorably reported on.

At Pembroke Dock the medical officer, speaking of the hut encampment, remarks that for the most part the huts are old and dilapidated, and should be replaced by brick structures. They are warmed by stoves, but an additional issue of fuel is usually required during winter to maintain them at a proper temperature. There is a good fall for drainage, but the surface drains are old, and in many places higher than the surrounding ground, and therefore require relaying.

It is remarked that at Taunton there is a great want of recreation ground, but that it is difficult to obtain this, owing to the position of the barracks, and the want of space near them; however, no evil result was traced to this defect.

The introduction of a boiler for hot water for the ablution of recruits at most of the barracks throughout the district was much appreciated.

Southern District.

The sanitary report by the Principal Medical Officer, Surgeon-General H. T. Reade, V.C., C.B., shows that "the hygienic condition pertaining to the barracks and hospitals throughout the district was, on the whole, satisfactory, and there was nothing insanitary in their vicinity to which disease could be attributed. The accommodation was good, except at Winchester, where, in consequence of the large number of recruits, the rooms became occasionally overcrowded, at one time to such an extent that it was found necessary to put a considerable number of men under canvas on the barrack square, but by removing large drafts to the service companies this difficulty was overcome. The ventilation of the barracks at Winchester is not very good, but, with this exception, ventilation, lighting, and warming is satisfactory throughout the district, and the condition of the different barracks showed no cause of unhealthiness.

"The drainage of the various stations was carefully looked after, and when any drains were out of order they were promptly repaired. The means provided for ablution are satisfactory, and the latrines and urinals were properly attended to.

"The water supply was of good quality and sufficient, except at Golden Hill Fort, Isle of Wight, where during the summer months it was necessary to bring water from some distance in carts to supplement the supply at the fort.

"The rations, on the whole, were good, but at Winchester there was some trouble regarding the meat supply; this was inquired into, and improvement resulted. With regard to clothing, an opinion was put forward that the recruits are not sufficiently clad during the winter months, and a suggestion made that they should be provided with a warm cloth tunic of the same description as that issued to older soldiers, and this plan appears desirable.

A considerable number of sanitary improvements were carried out in the different stations during the year, especially with regard to the renewal and ventilation of drains. Increased accommodation was afforded in some instances, and new ablution rooms and baths provided, together with many other minor improvements.

Netley.

Surgeon-General W. Sim Murray, Principal Medical Officer, reports that the sanitary arrangements of the Royal Victoria Hospital have been carefully supervised during the year, and any representation made regarding the sanitary condition was attended to.

"The hospital accommodation was ample, and no overcrowding occurred at any time during the year. The drainage, ventilation, &c., connected with the hospital and subsidiary buildings were satisfactory.

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Kingdom.*

" A recommendation that a block of latrines on the dry earth system should be built outside the hospital at the back of the north wing, corresponding to those in the south wing, was carried out; and a latrine was erected at the cottages for the accommodation of the families living there.

" A second steam boiler (Merryweather's patent) was added to the pumping plant in the centre block for the better provision of water in case of fire. In the south wing the bore pipe in the artesian well was cleaned out and the well bored to a total depth of 350 feet.

" The kitchens were clean and in good order and the cooking satisfactory.

" The instruction in cooking is still continued, and the classes were on the whole satisfactory, and successfully carried out.

" The rations on the whole were good, but at one time during the year the meat provided by the contractor for beef tea for the patients was not of a quality good enough for the purpose. This was represented, and in future contracts the portions of meat to be supplied for beef tea will be specified.

" The sanitary condition of the lunatic hospital received careful attention at the hands of the medical officer in charge, and the establishment was always well kept and in good order."

Chatham District.

The Principal Medical Officer, Deputy Surgeon-General E. H. Roberts, reports that at Chatham the various barracks were in a fair sanitary condition during the year; and due attention was paid to the minor sanitary suggestions it was thought necessary to make. At the station hospital urinals were fitted in an *annexe* to each ward, and a bath and ablution room was provided for the wards in the casemates. It is suggested that a ward should be fitted with special heating apparatus for the treatment of bronchial and pneumonic cases, as the wards being large and the means of warming being only an ordinary fire-place at each end, it is found impossible to maintain the necessary temperature for the successful treatment of such cases.

At Sheerness the barracks were in good sanitary condition. The station hospital ablution room was fitted with a new set of Jennings' basins, the old-fashioned slate benches and basins being removed.

At Gravesend also the barracks were in good sanitary condition. The old hospital, situated in New Tavern Fort, was dismantled and converted into a barrack, and the new station hospital in Milton barracks was taken over and occupied in the early part of the year. The wards are circular, having a dome roof; the walls painted a light green colour, the dome washed of a light yellow colour; the effect is pleasing to the eye, and as the walls are painted they permit of cleaning with soap and water. The ventilation is good, but the means of heating the wards are not quite satisfactory, in spite of the special appliances for this purpose, and a large expenditure of fuel.

Throughout the district the rations were good, and the water excellent. The clothing was according to regulation, but the Principal Medical Officer suggests that drawers should be added to the kit of the infantry soldier, issued to him as a recruit and kept up by him afterwards as "necessaries." It is pointed out that the expense would not be great, and that the gain in health, comfort, and cleanliness would be incalculable.

Gymnastic instruction was carried out regularly, and was beneficial to the health and general physique of the men.

*South-eastern District.**United Kingdom.*

The Principal Medical Officer, Deputy Surgeon-General D. A. C. Fraser, M.D., reports that the accommodation, ventilation, warming, drainage, and the sanitary conditions generally in barracks, hospitals, and their surroundings were, as a rule, satisfactory throughout the district. There were no serious sanitary defects, and all minor sanitary recommendations were duly attended to.

At Canterbury it was thought by the medical officer in charge that the serge clothing for fatigue purposes was very unsuitable, and a large portion of the sickness from respiratory affections was attributed to this cause. Orders were issued by the commanding officer that during severe weather the men should wear their capes at all drills, and for going about, but for stable duties it did not seem possible to carry this out. The Principal Medical Officer thinks the point important, and one which requires further investigation.

At Brighton it was necessary during the summer months to supplement the guard-room accommodation by a tent. At Dover certain casemated officers' quarters were found to be excessively damp, on which account it was recommended that they should be vacated; this was carried out.

The following are the principal sanitary services which were carried out during the year: At Dover Castle the main sewer was ventilated in two places; additional tank provided to each watercloset in officers' quarters; re-arrangement of drainage with improvements in ventilation in field officers' quarters, and improvements in drainage from ablution room in the east casemates. At the Western Heights the ventilation and lighting of the cells in the citadel were improved; and at the station hospital the down pipes were disconnected from the drainage system.

At Shorncliffe Camp four new huts (two concrete and two brick) were erected. They accommodate each one non-commissioned officer and 48 men, and are provided with baths, ablution rooms, and night urinals.

At Dymchurch the want of light and ventilation experienced in the casemates was remedied by forming a window through the escarp wall of one casemate.

At Canterbury, in the cavalry barracks, a new prisoners' room was provided, the recreation room enlarged, and the drainage improved.

In the barracks at Brighton, also, improvements were made in the prisoners' room with regard to ventilation.

Home District.

The Principal Medical Officer, Deputy Surgeon General Sir James Hanbury, K.C.B., reports that "the barracks and hospitals in the district, with the exception of that at Rochester Row, London, afforded sufficient accommodation during the year, and their sanitary arrangements were generally satisfactory, though in some certain minor defects were observed, which were brought to notice. There was some temporary overcrowding at the recruiting depôts, owing to the sudden influx of recruits at times, but it was not of a nature to be in any way prejudicial to health."

The Principal Medical Officer reports his opinion that the underclothing of the soldier is insufficient in the winter months, and considers that this matter calls for serious attention. The blue serge clothing is, he thinks, too thin and poor, and therefore quite unsuited for winter wear.

Another important matter bearing on the health of the soldier is noticed by the Principal Medical Officer, and is the want of a sufficient number of qualified cooks, especially in the regimental districts.

Among the chief improvements mentioned by the Principal Medical Officer are, in the cavalry barracks, Windsor, attention to the surface drainage,

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which is very defective, increased accommodation in the guard room, and the provision of means of supplying hot water to the bath rooms. The latter requirement is said to exist also in the infantry barracks, Windsor, and the Albany and Knightsbridge barracks, London. At Hounslow the surface drainage requires attention, and the ventilation of the infantry lock-up room should be improved; and at Hampton Court barracks filtered water should be laid on, both in the old and new barracks.

Woolwich District.

The Principal Medical Officer, Deputy Surgeon-General J. Tulloch, reports that very many important sanitary improvements were executed during the year, and as funds become available further improvements will be made in the same direction.

The accommodation for the troops was sufficient, but "in many instances that for the married families is not satisfactory, and in some cases families have to reside in lodgings in the town, a state of things which conduces neither to health nor discipline."

The means of ablution are generally satisfactory, but the Principal Medical Officer remarks that there is no provision for any systematic supply of hot water to the baths, and thinks that this would be a most desirable addition.

The clothing is reported to have been sufficient and suitable. An extra blanket and an increased allowance of fuel were sanctioned during the cold weather.

With regard to the rations, the Principal Medical Officer states that on the whole they were of good quality, and very careful supervision was exercised over them. He is of opinion that an increased quantity of meat in the rations would be of advantage to young soldiers. There were no complaints of the cooking for the troops.

The means of recreation were sufficient, and the effects of the gymnastic training were satisfactory.

The hospital accommodation was sufficient for all purposes, but the advisability of the provision of an infectious hospital is referred to. None at present exists, and all infectious cases occurring in the garrison are therefore transferred to the Herbert Hospital for treatment. For this purpose it is necessary to set apart the upper wards of one of the pavilions for such cases, an arrangement that does not ensure perfect isolation, and which might possibly give rise to serious difficulties.

The rations for the hospital are reported to have been good; the bread excellent, and the cooking satisfactory.

The water supply to the hospital is all that could be desired as regards quality, but the distribution of hot water to the upper part of the administrative block is not satisfactory in consequence of the low level of the supply pipe. It is said that the question of altering the elevation from which the water is distributed is under consideration.

Aldershot Division.

The report of the Principal Medical Officer, Surgeon-General J. Hendley, C.B., shows that, generally speaking, the sanitary condition of Aldershot was satisfactory, and the health of the troops good, comparing favorably with that in the preceding year. The accommodation for the troops was sufficient, and though the wooden huts are old and defective in many respects the occupants are quite as healthy as those of the permanent barracks. At the North Camp a number of brick huts were erected, of which many are occupied, and there are many in course of building. They are supplied with every requisite for health and comfort.

It is stated that there was an improvement in the water supply, and that the greater part of the permanent barracks, the South Cavalry barracks excepted, are now supplied by the Aldershot town waterworks, and arrangements are being made for a more extended supply to the camp. The water is of very good quality. *United Kingdom.*

The drainage of the camp was closely attended to, and various defects in trapping and in connecting pipes were remedied. The barracks as well as the camps are now in a satisfactory condition with respect to drainage.

The Principal Medical Officer remarks that although no injury to health has been traced to the defects which have been brought to the notice of the local authorities from time to time, some have existed which are calculated to exercise a prejudicial influence, such as insufficient ventilation from various causes, insufficient space in prisoners' rooms and guard-room cells, overcrowding in some few huts and workshops, inadequate provision of means of ablution, &c.; however, recommendations which were made on these points in most instances met with attention.

With regard to clothing, the Principal Medical Officer expresses his opinion that in winter time the soldier is insufficiently provided, and thinks that this is especially evident in the clothing supplied to the recruit, which consists of a serge frock and trousers and a flannel shirt, the whole of which weigh less than five pounds. He recommends the addition of a woollen jersey to the winter kit, such as is in some regiments supplied to men from the canteen fund or sold to them at a reduced rate.

The rations of the troops were good and sufficiently varied, and the means of cooking satisfactory.

The hospital accommodation was made sufficient by utilizing the surplus huts of the 3rd Station Hospital, and there was no difficulty in accommodating all the sick, although the inclement weather in the winter time occasioned such an increase in the amount of sickness as to make it desirable to get extra huts ready.

The sanitary improvements during the year comprised attention to drainage of all parts of the camp, by considerable alterations, cleansing, and ventilation of drains, abolition of cesspits, &c. At the Cambridge hospital a large new water tank was in course of construction for an independent supply of water to that building.

North British District.

The Principal Medical Officer, Deputy Surgeon-General W. M. Webb, reports that the health of the troops during the year was very good, and the sanitary condition of their quarters generally satisfactory.

Among the sanitary improvements carried out and in progress during the year, may be mentioned the following: At Edinburgh certain new buildings at the entrance to the Castle, comprising guard-room and cells, stables, and a store, were commenced; and arrangements for new workshops were considered. The station hospital was given up with a view to its restoration to its original condition when it was used as a Parliament house for Scotland. The sick are now treated in the military hospitals at Piershill, Leith Fort, and Glencorse; but the most serious cases are sent to the Royal Infirmary. Certain alterations in connexion with a scheme of re-appropriation at Leith Fort and Easter Road Barracks to provide headquarters and dépôt for the Scottish Division, Royal Artillery, were being carried out. At Piershill quarters were erected for one warrant officer and one staff sergeant, and were nearly completed; improvement in the draining of the riding school was effected, and gymnastic apparatus provided. At Hamilton the drill ground has been drained and improved, and a store for clothing provided. The new barracks at Inverness were taken into use in the course of the year, and also the hospital, which contains 15 beds, is well ventilated, warmed, and lighted, and provided with the necessary bath accommodation.

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It is remarked that the existence of a sewage farm in the immediate vicinity of the cavalry barracks at Piershill, and of an open ditch, which contains the sewage of Edinburgh, are objectionable, but it does not appear that any bad effects can be traced directly to these conditions. At Maryhill, Glasgow, also there is a stream called the Possil Burn, which is merely an open sewer, and in hot weather is very objectionable. In this case it is believed that steps are being taken to remedy this insanitary condition by laying down 12-inch pipes to divert the sewage.

Certain other sanitary requirements are enumerated, among which are improvement in ventilation of the drains at Hamilton, increase of latrine accommodation at the hospital, Maryhill, and improvement in lighting the barracks at Fort George.

Channel Islands.

The Senior Medical Officer, Brigade Surgeon R. W. Berkeley, reports that the health of the troops in the Channel Islands was good throughout the year, and that the reports from all the stations were of a satisfactory nature.

The sanitary condition of the different barracks and quarters was generally satisfactory; the accommodation for the men was sufficient, and the ventilation, warming, and lighting satisfactory.

In the preceding year it was stated that the accommodation for married families was insufficient at Guernsey, but no complaint was made in the year under report. Regarding the ablution room at the hospital at St. Peter's, Jersey, which is mentioned as requiring improvement, the Senior Medical Officer thinks it advisable that Jennings' basins should be supplied and water laid on. It is reported that the latrines at Alderney, which were complained of in the previous year, were bricked in, with good results.

Among other sanitary improvements carried out during the year may be mentioned alteration in the ventilation of the latrines at the hospital at Fort Regent, improvement in the water supply to the married quarters at the Lower Keep, Elizabeth Castle, a new guard-room cell provided at Elizabeth Castle, and water laid on to the married quarters in Green Street, St. Heliers.

Belfast District.

The Principal Medical Officer, Deputy Surgeon-General E. M. Sinclair, M.D., reports that the general health of the troops was good throughout the year, though the conditions were very exceptional under which a number of them were placed, consequent on a large increase to the garrisons of Londonderry, Armagh, and Belfast, on account of civil disturbances.

The sanitary condition of the barracks throughout the district is reported to be as good as circumstances admit of. There was some overcrowding in the barracks at Londonderry, Dundalk, Newry, and Belfast, inasmuch as the rooms were unavoidably occupied according to the basis of the old construction.

Consequent on the riots in Belfast the garrison at that place was much increased, and additional accommodation in hired buildings and huts for a battalion of infantry and a squadron of cavalry was provided. Additional huts for married soldiers and for officers were also in course of erection.

At Belfast some quarters for warrant officers were erected, a commodious recreation and reading room was added, and improvements were effected in the water supply.

At Dundalk, the town water was in part supplied to the barracks; this was found to be a great improvement.

During the riots the troops under canvas and those occupying the drill sheds were supplied with the field ration, but with this exception, there was no change in the rations of the troops. *United Kingdom.*

The hospitals in the district are reported to be fairly satisfactory, excepting that of Belfast, which since the garrison was increased, is inadequate to the requirements; it is, moreover, badly situated. Two floors of one wing of the barracks occupied by the Royal Irish Rifles were utilised as hospital wards, and the accommodation for sick much increased thereby, but this arrangement was only of a temporary character. A scheme of enlargement of the hospital main building has been submitted.

The drainage of the barracks throughout the district is reported to be in fair condition. Additional permanent latrines were added to the barracks at Belfast.

With regard to the duties of the men, it is stated that during the summer there was at many stations in the district unusually severe work imposed upon the troops in aiding the civil power to keep down disturbances, and the men were consequently much harassed. This was especially the case at Belfast, but fortunately, although the season was an unusually wet one, and much exposure was entailed, the health of the troops did not suffer to any material extent.

Dublin District.

The acting Principal Medical Officer, Brigade-Surgeon H. F. Paterson, M.D., reports that the health of the troops during the year was good, and the several barracks were kept, generally speaking, in a good sanitary condition.

The accommodation for the troops was generally sufficient, being the same as during the previous year for a smaller strength. Several of the barracks in Dublin are very old, and being of obsolete construction are wanting in the improved sanitary arrangements to be found in modern buildings of a similar character. The Royal barracks were made the subject of a special inquiry by a board of officers towards the end of the year, owing to the occurrence of several cases of enteric fever, and the matter is still under consideration. At Richmond barracks certain sanitary defects were remedied. The drainage is said to have been generally satisfactory. Some improvements were made in the ventilation of the main drains in the Royal barracks. The drains from these barracks, and from those at Island Bridge empty themselves into the River Liffey.

The warming and lighting of the various barracks throughout the district were satisfactory. Extra coal was issued on recommendation during the severe weather. The lighting was supplied by gas or mineral oil.

The water supply throughout the district is, as a rule, good and abundant. In Dublin it is derived from the River Vartry, and having passed through filter beds, it is supplied in a pure state, and does not require further filtration. The water supply at Birr is from a pond fed by springs in a field outside barracks; it is pumped into tanks by a windmill, supplemented by manual labour. The quality is good, but the quantity during the summer months is insufficient. The water supply at other out-stations is satisfactory.

The ablution accommodation in the various barracks is fairly good, and, together with bathing parades, sufficient for personal cleanliness. Latrines are kept in good sanitary condition. Extra accommodation of this nature was provided in the Royal barracks. At some of the out-stations the dry-earth system is in use, and is reported to work well.

The amount of hospital accommodation is insufficient for the garrison of Dublin, and several parties of sick, chiefly cases of venereal disease, were transferred from time to time to the Curragh hospitals to prevent overcrowding. The hospitals throughout the district are all kept in a good sanitary condition, and ventilation, warming, &c. are satisfactory.

Among the chief sanitary improvements during the year may be mentioned, Provision of two blocks of quarters for staff sergeants and families at Arbor

*United
Kingdom.*

Hill; improvements to drainage and increased provision of latrines at the Royal barracks; together with increased accommodation for married families and enlargement of sergeants' mess. Certain drains taken up at Island Bridge and re-laid to improve fall. Considerable improvements in drainage effected in Richmond barracks. In out-stations also various improvements in accommodation, ventilation, water supply, drainage, &c., were effected.

Cork District.

The Principal Medical Officer, Brigade-Surgeon J. J. Chappell, reports that no great change took place in the accommodation of the troops during the year; slight overcrowding occurred at one or two of the stations, which was remedied either by the use of tents or the removal of detachments to some small stations previously unoccupied. The only alteration in hospital accommodation was the opening of two newly built huts at Clonmel, which increase the accommodation by 16 beds; the huts are strongly built, comfortable, and well adapted for the purpose for which they are required.

The drainage of the different stations was, in general, effective, and the vicinity of the barracks satisfactory in this respect. The dry-earth system of conservancy exists at most of the stations, and water carriage at others; at Spike Island, and some of the smaller stations, which are only occasionally occupied, cesspits still exist; it has been recommended that dry-earth closets should be substituted, but in one instance only was this carried out. The representations on this subject at Spike succeeded in causing more frequent cleansing of the cesspits and the more frequent use of disinfectants, but the necessity for closing these pits and the adoption of a system of conservancy more in accordance with modern sanitary ideas still exists.

The means of ablution were the same as hitherto, as well as the clothing, both in kind and in quality. The rations and means of cooking also remained unchanged.

The hospital accommodation throughout the district was sufficient, with the exception of that at Cahir and Queenstown, at which stations it was necessary to pitch marquees during the summer months; at the former to accommodate an increased number of venereal cases, and at the latter an influx of sick from the militia.

Among various sanitary recommendations the Principal Medical Officer notices several made regarding the barracks, &c., at Cork, such as the improvement of sewer ventilation throughout the barracks; improvement of surface drainage, particularly in and near the cavalry stables; careful examination of the whole of the waterpipes entering the barracks from the main; and various others.

Curragh District.

The Principal Medical Officer, Brigade Surgeon W. O'Halloran, reports that the sanitary condition of the Curragh camp, Newbridge barracks, and their vicinities was, on the whole, satisfactory, and no disease was referable to defects in this respect. Two cases of enteric fever occurred in the right wing of the Curragh camp, and one in the left, but there was no evidence to connect the disease with any local insanitary condition.

In July and August there was slight overcrowding in some of the huts at the Curragh, but this defect was remedied. No ill effects resulted from the temporary overcrowding.

At Newbridge hospital the latrines were in an unsatisfactory state in the early part of the year and up to the middle of summer when they were replaced by new ones, with favorable results. A new well was sunk at Newbridge, which furnishes a supply of water for flushing purposes. The water supply generally is good and sufficient, and the drainage satisfactory.

In No. 2 station hospital two additional brick wards were built in the course of the year, but only one has yet been occupied. One ward was still in the hands of the engineer department, and this being completed, a total accommodation of 168 beds will be afforded. In four of these buildings an attempt was made to obtain a ward for special cases, by altering the original construction and cutting off a portion from the main ward, but the room thus provided is small, situated off the entrance passage, and not adapted for serious cases of illness. *United Kingdom.*

In the left wing of the camp a large building was erected, containing reading and recreation rooms, and a shed was also built for drill purposes in wet weather.

III.—ON THE HEALTH OF THE TROOPS SERVING IN THE MEDITERRANEAN.

Sickness and Mortality.

I.—GIBRALTAR.

Gibraltar.

The average strength of the warrant officers, non-commissioned officers, and men serving in the garrison during the year was 4,307, and was composed of seven batteries Royal Artillery, four companies Royal Engineers, and detachments Departmental Corps and Garrison Staff throughout the year; also of the 1st Battalion Norfolk Regiment, 1st Battalion East Yorkshire Regiment, 1st Battalion Cheshire Regiment, and 3rd Battalion Rifle Brigade, all of which left the garrison during the year, being replaced by the 1st Battalion Staffordshire Regiment, 1st Battalion West Kent Regiment, 3rd Battalion King's Royal Rifles, and the 2nd Battalion Royal Irish Rifles, which were still in garrison at the end of the year; also the 2nd Battalion King's Own Borderers, which was only a few months in the Command.

The principal health statistics of the troops serving in Gibraltar during the year are shown in the subjoined table:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
4,307	3,634	36	5	41	116	30	211·38	843·7	9·51	20·93	6·96	49·07

Compared with the corresponding rates in the previous year a considerable decrease, 210·1 per 1,000, is observed in the ratio of admission, and one of 8·18 in the ratio of constant inefficiency, but in that of mortality there was an increase of 1·47 per 1,000; and in comparison with average ratios for the preceding 10 years an increase is observed in all, amounting to 27·9 per 1,000 in the case of admission, 2·60 in that of mortality, and to a fractional extent in that of constantly sick. The average sick time to each soldier was 17·91 days, and the average duration of each case of sickness 21·23 days, the former being shorter by 3·35 days, and the latter longer by 1·06 days than the corresponding periods in the preceding year, while compared with average periods for the previous 10 years, the former was longer and the latter shorter, but both to a fractional extent.

It will be observed from the foregoing figures that the health of the troops was generally much better than in the previous year, but that there was an increase in mortality over that year to a slight extent, and both years were considerably above the average. In the year under report this increase was due to an outbreak of enteric fever.

In Abstract XLII. are shown the more important of the health statistics of the different corps which served in the garrison during the year. The greatest amount of sickness and mortality occurred in the 1st Battalion South Staffordshire Regiment, the annual admission ratio being 1277·1 per 1,000, the death rate 24·10, the invaliding rate 90·36, and the rate of constant inefficiency 87·05 per 1,000. This regiment was only six months in the garrison, having arrived

from Egypt at the end of June. The high rate of mortality was due to the number of deaths from enteric fever. The lowest ratio of admission was in the Royal Artillery, 578·5 per 1,000; mortality was nil in the 1st Norfolk and 1st Cheshire Regiments, the former six months and the latter only six weeks in the garrison, and the lowest recorded death rate was 4·58 per 1,000 in the Royal Artillery; the lowest invaliding ratio was 2·67 per 1,000 in the Norfolk Regiment, but this corps left for England in June, and the lowest ratio of constant inefficiency through sickness was 30·58 per 1,000 in the Royal Artillery. It is observed, with regard to sickness and mortality at different ages, that the admission rate of soldiers under 20 years of age was 1218·9 per 1,000, and the death rate 2·33 per 1,000; among men between 20 and 25 years of age the admission rate was 839·6, and the death rate 8·73 per 1,000; and among men between 25 and 30 years of age the ratio of admission was 650·1, and that of mortality 10·39 per 1,000. It has been calculated also, to observe the influence of length of service in the command, that the admission ratio of men under one year's service was 1030·1 per 1,000, between 1 and 2 years 556, between 2 and 3 years 1739·6, between 3 and 4 years 970·6, and between 4 and 5 years 1027·0; it must be remarked, however, the ratios after the second year depend on comparatively small numbers. Mortality was equal to 10·47 per 1,000 in the first year, 5·02 in the second year, and 31·24 in the third.

The admissions and deaths, &c. in the different groups and orders of diseases are shown in Abstract II.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In sub-group 1 *eruptive fevers* are represented by a single case of scarlet fever of severe type, which was admitted from Rosia Barracks in October; its origin could not be traced, and the disease was not prevalent among the civil population. The man ultimately recovered.

Enteric Fever.—The admissions were 158 in number and deaths 26, being in the ratios of 36·7 and 6·04 per 1,000. In the preceding year there were 25 cases and 5 deaths. The medical officer in charge of the station hospital, Brigade Surgeon J. Warren, reports that "the disease prevailed as an epidemic in June, July, and August in the Royal West Kent Regiment, the Royal Engineers, and the South Staffordshire Regiment. These troops occupied barracks far apart from one another, and no connexion was traced between the outbreaks in each barracks. The rest of the garrison was remarkably free from fever during these three months. The Royal West Kent Regiment arrived from Egypt on 16th June and were quartered in the Casemate Barracks. Cases of enteric fever were admitted daily from this regiment from all companies up to the middle of July, when the outbreak ceased. The disease in this corps was evidently contracted in Egypt, and it is believed that very few, if any, cases originated in the garrison. The outbreak of the disease among the troops quartered in the Town Range, Hargreaves and Buena Vista Barracks was, in the opinion of the medical officer in charge, sufficiently accounted for by certain serious sanitary defects which existed in them, which is borne out by the fact that the disease ceased when the barracks were vacated, and when they were re-occupied after the defects had been remedied there was no recurrence of the disease. With regard to the cases which occurred at Buena Vista, it is stated that nearly all came from a stone two-storied building occupied by 2½ companies South Staffordshire Regiment, and that 3 companies of the same regiment which arrived from Ramleh at the same time and were quartered at Windmill Hill, did not furnish a single case of fever. If the disease was of Egyptian origin the whole regiment would have suffered, and the cases would have occurred regularly after the arrival of the regiment, as was the case in the Royal West Kent Regiment. Seven cases of enteric fever of a severe type were admitted from the North Front, four of which proved fatal; careful search was made for the origin of these cases, but without result. Six cases were admitted from the South Barracks; of these four occurred in March and April and came from the officers' mess, where only five men were employed and slept; the cause of this outbreak was never discovered. Five cases occurred in the station hospital, some of which, it is believed, were contracted during attendance on other cases."

Gibraltar.

Other continued fevers caused 173 admissions, equal to a ratio of 40·2 per 1,000, which is considerably below the corresponding ratio in the preceding year, being but little more than one fourth; it is also much below the average rate.

Malarial fevers.—Under this head are recorded 22 cases of ague; all of these occurred in the King's Royal Rifles, part of which regiment came from Cyprus, where the disease was doubtless contracted.

Septic Diseases.—Five admissions for erysipelas occurred, all of which were idiopathic, and had no connexion with one another.

Syphilis and Gonorrhœa caused 1,065 admissions, or 247·3 per 1,000. The ratio of admission for primary syphilis was 61·8 per 1,000. This ratio cannot be compared with those of preceding years, owing to the change in registration due to the adoption of the new nomenclature of diseases, unless the cases returned as ulcer of the penis be added; when this is done the admission ratio is found to be 179·4 per 1,000 as compared with 171·6 in the preceding year, both of which are above the average rate. The ratio of admission for secondary syphilis, 33·7 per 1,000, is increased by 1·5 over that in the previous year. Gonorrhœa caused an admission rate of 151·8 per 1,000 as compared with 158·3 in the preceding year, and is in excess of the average ratio. The total admission ratio for all forms of venereal disease was 365·0 per 1,000, and the ratio of constant inefficiency from these affections 21·85 per 1,000; these ratios are slightly below the corresponding ratios in the previous year, which were considerably higher than those in 1884, and than average ratios.

In sub-group II. of Group B. diseases due to errors in diet are shown 35 admissions for *alcoholism*, 3 of which were cases of delirium tremens; in the previous year there were also 3 cases of delirium tremens, and 18 cases returned as alcoholic poisoning.

Under Group C. are returned 36 admissions for *debility*, nearly all of which were the result of simple continued fever; the admission ratio, 8·4 per 1,000, is, however, considerably less than in the previous year.

The next group of diseases includes *rheumatism*, for the different forms of which there were 184 admissions, equal to a ratio of 42·7 per 1,000, which compares favorably with the last year's rate, but is about the average. Of the cases 13 were rheumatic fever, all of which recovered.

Tubercular diseases caused only 12 admissions, 8 being for tubercle of the lung and 4 for scrofula. Two deaths from the former disease occurred amongst invalids after having left the command.

Among *other diseases* are returned three cases of non-malignant growth, which were successfully removed; also two cases of malignant disease, both of which proved fatal. One of these cases was a sarcomatous tumour on the right side of the lower jaw, which rapidly increased in size and was removed by operation, but the patient died from exhaustion a fortnight afterwards; the second case was malignant disease of the liver, which made rapid progress; at the post-mortem examination the liver was found enormously enlarged, weighing 8½ lbs., consisting almost entirely of cancerous growth (scirrhous), the mesenteric glands being also implicated. The age of these two men is alluded to, both of them being only 24 years old.

LOCAL DISEASES.—*Diseases of the Nervous System* show only 4 admissions, one for neuralgia and the remainder for mental disease; the latter were invaded.

Diseases of the Eye caused 59 admissions, all, except one of iritis, being mild cases of conjunctivitis; the ratio of admission, 13·7 per 1,000, shows a decreased prevalence of these affections.

Diseases of the Circulatory System show only two admissions, one for hypertrophy of the heart, which was invalided; and one for aortic aneurysm, which proved fatal. An invalid after arrival at home also died of aortic aneurysm. The small number of these diseases is particularly marked when compared with the preceding year, in which there were 54 admissions.

Diseases of the Respiratory System caused 163 admissions, equal to a ratio of 37·8 per 1,000, which is higher than the rate in the previous year by 9·3, and is also above the average. Of the cases 145 were bronchitic affections; among the remainder were 14 cases of pneumonia, "which were not generally " severe, but one case proved fatal in an intemperate man, who was also

“suffering from the depressing effects of a very large dose of opium taken *Gibraltar*.
“with suicidal intent.”

Diseases of the Digestive System were the cause of 335 admissions, chiefly due to sore throat, dyspepsia, and diarrhosa. The admission ratio is below the average, and that of the previous year. The cases of dyspepsia were 65 in number, and are said to have been mostly due to intemperance. One severe case of typhilitis is recorded, which was ultimately invalidated home for change of climate. There were 25 cases of jaundice, mostly due to chill, all of which recovered. One death took place from perityphilitis in an invalid after arrival at home.

Diseases of the Lymphatic and Glandular System caused 70 admissions, cases of inflammation or suppuration of glands, some of which were tedious and necessitated prolonged treatment. The admission ratio was 16·2 per 1,000.

Diseases of the Urinary System.—No admission is recorded under this head, but one case of Bright's disease, remaining from the preceding year, proved fatal. An invalid at home also died of this disease. The absence of admissions as compared with the large number in the previous year is, of course, chiefly due to the alterations in this order of diseases in the new nomenclature.

For the same reason a great increase is observed in the prevalence of *diseases of the generative system*, the admissions for which numbered 537, or 124·7 per 1,000. 507 of these admissions were cases of ulcer of the penis, formerly returned under the head of syphilis. The remaining cases were 27 of orchitis, 2 of stricture of the urethra, and one of hydrocele.

Diseases of the organs of locomotion caused only 3 admissions, and *diseases of the connective tissue* 53 admissions, or 12·3 per 1,000, less than half the number in the preceding year. The admissions for *cutaneous diseases*, 167 in number, or 38·7 per 1,000, also declined considerably in this comparison.

Poisons.—One case of poisoning by opium with suicidal intent is recorded. It is stated that 22 grains of opium were swallowed “and recovery was due “to the subcutaneous injection of half a grain of sulphate of atropine and to “galvanism.” This is the case previously alluded to, which subsequently proved fatal from pneumonia.

Injuries.—One death is returned from asphyxia from submersion. “The “man, who had been drinking to excess, was upset from a boat; he lived for “eight hours after removal from the water; respiration was re-established, “but he never recovered consciousness, and died comatose.” Local injuries caused 493 admissions, the ratio, 114·5 per 1,000, differing only fractionally from that in the previous year. Contusions, wounds, and sprains were the chief causes of admission, and these together numbered 416; there were also 19 admissions for fractures, 49 for blisters of the feet, 8 for burns or scalds, and one for dislocation. There were three deaths from wounds; one was a case of suicide, a man having cut his throat with a razor, a verdict of temporary insanity was returned by the court of inquest; the second was a case of homicidal wound of the abdomen, a man having been stabbed with a knife by a Spaniard; and the third was a case of accidental gunshot wound, a sergeant having been shot while painting a target on the rifle range. Another accidental gunshot wound occurred, a gunner being struck on the left arm by a fragment of a shell while in a boat, marking at gun practice at a floating target; amputation was necessary, and the man was invalidated.

Invaliding.—The number of men invalidated home was 116, equal to 26·93 per 1,000, which is lower than the rate in the preceding year by 12·35, and than the decennial average rate by 4·48 per 1,000. Among the causes of invaliding may be mentioned 58 cases of enteric fever, or 13·47 per 1,000, and 10 cases of other continued fevers, or 2·32 per 1,000. Debility was the cause of the invaliding of 21 men, or 4·87 per 1,000, mostly after attacks of fever; rheumatism shows 6 cases, or 1·39, and tubercular diseases 8, or 1·86 per 1,000. The number of men finally discharged by invaliding was 30, being in the ratio of 6·96 per 1,000, which is lower than in the previous year by 7·54, and than the decennial average rate by 6·94 per 1,000. The chief causes of discharge in this manner were debility 8 cases, or 1·86 per 1,000; tubercular diseases 5 cases, or 1·16 per 1,000; rheumatism 3 cases, and diseases of the circulatory system 3 cases, or ·70 per 1000. With regard to the influence of age and length of service in the command, it has been calculated

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that the ratio of invaliding among men under 20 years was 5·82 per 1,000, between 20 and 25 years 31·70; between 25 and 30 years 33·49, declining after that period. Of men under one year's service in the command the invaliding ratio was 34·34 per 1,000; between 1 and 2 years 14·42, and between 2 and 5 years 54·76 per 1,000.

Officers.—The average strength of officers was 176; there were 68 attacks of illness, 2 deaths, and 11 officers were invalided. The ratio of prevalence of sickness was 386·4 per 1,000, that of mortality 11·36, and that of invaliding 62·50 per 1,000. Compared with results in the preceding year a decrease is observed in the ratio of prevalence, but an increase in the ratios of death and invaliding. The prevailing disease was simple continued fever, of which there were 10 attacks, invaliding was necessary in one case. Enteric fever caused three admissions, two of which terminated fatally; all the cases were contracted in Egypt, and were of a severe type. The case which recovered was invalided. Among other cases treated was one of dysentery, contracted in India, and one of epithelioma of the tongue; both these were invalided; it is stated that the latter proved fatal some weeks after arrival in England.

Women.—The average strength of women was 264, and there were 155 attacks of illness, and one death. The ratio of prevalence of sickness was 587·1, and that of death 3·79 per 1,000, the former having increased and the latter decreased as compared with the preceding year. Fevers were the most prevalent affections, 52 attacks of simple continued fever, 2 of dengue, and one of enteric fever being recorded. No cause could be assigned for the last named. Among the remaining attacks of illness the greater part were due to diseases of the digestive and generative systems.

Children.—In an average strength of 489 children there were 241 attacks of illness and 21 deaths. The ratio of prevalence of sickness was therefore 492·8 and that of mortality 42·94 per 1,000. Compared with the corresponding ratios for the preceding year the rate of sickness has increased to some extent, but that of mortality considerably. The most prevalent diseases were diarrhoea, bronchitis, and simple continued fever. Among the remaining cases were 6 of chicken-pox, 2 of dengue, 15 of whooping cough, 12 of diphtheria, and 2 of enteric fever. The deaths were caused as follows:—Diarrhoea 5 cases, convulsions 4, enteritis 4, bronchitis 3, and simple continued fever, enteric fever, dysentery, gastritis, and teething, one case respectively.

Sanitary Conditions.—The Principal Medical Officer, Surgeon-General A. H. Fraser, reports that the general sanitary conditions of the barracks, including the drainage, were satisfactory, with the following exceptions:—During the outbreak of enteric fever above described grave sanitary defects, especially as regards drainage, were discovered in the Buena Vista, Hargreaves, and Town Range Barracks; these defects were remedied. The barracks, which had been vacated, were re-occupied, and there was no recurrence of the disease.

The water supply was of good quality and sufficient in quantity; the rations also were of good quality, and no change was necessary. The means of cooking were satisfactory, and the clothing and bedding sufficient, and suitable to the climate and different seasons.

The principal sanitary improvements effected during the year, in addition to those already mentioned, were:—In the Casemate Barracks, improvement in ventilation of tailors' shop, and disconnection of waste pipes of ablution rooms from sewers; in the Moorish Castle, provision of latrines to staff sergeants' quarters, and sanitary arrangements of officers' quarters much improved; in the South Barrack, Block House, Europa, and Defensible Barracks, wooden floors substituted for stone in several rooms; in the Brewery Barracks, Europa, improvements in ventilation of cook-house, and in the filter of rain-water tank; in Hargreaves Barracks, improvement in ventilation of lower rooms; in King's Bastion, improvements in drainage; in the North Front Hutments, a 5,000-gallon cast-iron tank erected for the storage of rain water; in certain officers' quarters, re-modelling of sanitary arrangements, and in officers' quarters generally in the north district Doulton's wash and closet apparatus was substituted for old pans and traps. At the station hospital water-closets, urinals, and drains were re-constructed; the coal-cellar and linen store, which were destroyed by a landslip, were rebuilt, and bath and

ablution room repaired. A house in the hospital previously occupied by *Gibraltar*. medical officers was re-appropriated for four nursing sisters.

The Principal Medical Officer records his opinion that a female hospital is urgently required for the use of soldiers' families at this station.

II.—MALTA.

The average strength of the troops serving in Malta during the year was *Malta*. (with the exception of the Royal Malta Fencible Artillery) 4,736, and the garrison was composed as follows:—Artillery, 5 batteries throughout the year, two batteries from the commencement until 16th November, and detachments of two batteries during the last two months of the year. Engineers, two companies. Infantry, 1st Battalion Duke of Cornwall's Light Infantry, 1st Battalion Gordon Highlanders, and 2nd Battalion South Yorkshire Regiment. These were augmented in May by the arrival from Egypt of the 1st Battalion Royal Highlanders and a half battalion 1st Royal Berkshire Regiment. The 2nd Battalion Royal Inniskilling Fusiliers were in garrison for the first four months of the year, and the 1st Battalion Hampshire Regiment only a few days. The Garrison Staff and detachments of the Departmental Corps completed the force in the island.

The following table gives the chief statistics of sickness and mortality among the troops during the year:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
4,736	3,435	26	8	34	77	59	220·82	725·2	7·17	16·25	12·45	46·62

Compared with the corresponding ratios in the previous year, a marked decrease is observed in all, being in admission rate 198·1, in death rate 7·60, and in constantly sick rate 12·49 per 1,000. In comparison with similar average rates for the preceding ten years a considerable decrease is observed in admission rate, 132·7 per 1,000; there is also a decrease of 3·08 in that of mortality, and one of 4·29 in that of constant inefficiency through sickness. The average sick time to each soldier was 17·02 days, and the average duration of each case of sickness 23·46 days, the former being shorter than the corresponding period in the previous year by 4·55 days, and than the average period in the preceding ten years by 1·56 days, while the latter is fractionally longer than in the previous year, and longer than the average period in the preceding decennium by 1·80 days.

The most important of the health statistics of the different corps which served in the garrison during the year are recorded in Abstract XLII.

The highest admission and constantly sick rates occurred in the Northern Division Royal Artillery, and were 1058·0 and 67·35 per 1,000 respectively. Excluding the Royal Inniskilling Fusiliers, which was only four months in garrison, the South Yorkshire comes next with an admission rate of 897·0, and a constantly sick rate of 57·92 per 1,000; this is closely followed by the Duke of Cornwall's Light Infantry, the ratio of admission being 854·8, and that of constant inefficiency 57·06 per 1,000. It is stated that simple continued fever was very prevalent in both the last-named regiments. The lowest ratios of admission and of constantly sick occurred in the London Division Royal Artillery, 434·2 and 26·85 per 1,000 respectively; the next above being

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the Royal Berkshire Regiment, which, however, was only seven months in garrison, with admission rate of 542·6, and constantly sick rate of 27·13 per 1,000. The corps showing the highest death rate, exclusive of departments, is the 2nd South Yorkshire Regiment, 9·70 per 1,000, chiefly from fevers and constitutional causes; this is followed by the Duke of Cornwall's Light Infantry, with 8·60 per 1,000 from similar causes; mortality was *nil* in the Western, London, and Cinque Ports Divisions, Royal Artillery, and in the Berkshire Regiment, and low rates are observed in the South Irish Division Royal Artillery, 2·84, and in the Gordon and Royal Highlanders, 1·31 and 3·82 per 1,000. Invaliding ratios varied from 33·33 and 32·25 per 1,000 in the Cinque Ports and Northern Divisions Royal Artillery to *nil* in the Berkshire Regiment, and 3·69 per 1,000 in the Duke of Cornwall's Light Infantry. With regard to sickness and mortality at different ages, the ratio of admission under 20 years of age during the year is found to have been 616·5 per 1,000; between 20 and 25 years, 889·1; between 25 and 30 years, 631·0; and over that age, 348·2; mortality under 20 years of age was equal to 4·26 per 1,000, between 20 and 25 years, 6·16; between 25 and 30 years, 4·03, and over that age, 6·60.

The admission rate among men under one year's service in the Command was 721·9 per 1,000; in the second year, 899·5; in the third year, 476·2; in the fourth, 1126·4 (the strength, however, in this period was small), and in the fifth year, 396·6; beyond this the ratio still further declined. Mortality in the Command in the first year was equal to 5·06 per 1,000; in the second year, 3·72; in third, 6·80; and further increase beyond that period.

The admissions, deaths, invaliding, &c. in the various groups and orders of diseases are shown in Abstract III.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—Specific Febrile Diseases.—34 admissions and 8 deaths from enteric fever are recorded, being in the ratios of 7·2 and 1·69 per 1,000 respectively, which compare very favorably with the corresponding rates in the preceding year, 20·2 and 5·22, and with the average similar ratios for the preceding five years, 18·7 and 3·87 per 1,000 respectively. The per-centage of deaths to attacks, 23·5, is lower than in the foregoing year. 30 of the cases, with 7 deaths, occurred at Cottonera; 3, one fatal, at Valetta; and one case, which recovered, at Citta Vecchia. Concerning the cases at Cottonera, the medical officer in charge remarks that some of the cases were very severe and succumbed early to the virulence of the attack. The admissions were chiefly among young soldiers, and the average age of those attacked being 22·6 years. The cause seems to have been the insanitary condition of the low public-houses frequented by the men, and not to any defect in sanitation in the barracks themselves, which are all reported to be in good order as regards drainage, latrines, &c., and to have, as a rule, water supply of good quality. The medical officer also notes that it is rather remarkable that only two women and not one child contracted the disease, although the families occupied quarters close to the various barracks and had the same water supply, food, &c.; this is another reason for the opinion that the disease is seldom contracted in barracks, but in the insanitary houses frequented by the men. It is said that relapses were frequent among these cases, and in all convalescence was protracted. For the three cases which occurred at Valetta no cause could be assigned; they happened at different periods of the year and in different localities.

Other Continued Fevers.—Under this head are recorded 730 admissions for simple continued fever, among which two deaths occurred. The admission ratio was 154·1 per 1,000, the death ratio ·42, and the constantly sick ratio 11·62, as compared with 181·9, 1·09, and 13·21 per 1,000 respectively in the preceding year, but they are all above the corresponding average rates to some extent. In the preceding year a large number of the cases were returned as febricula, but on account of the change in nomenclature such cases are included in simple continued fever in the year under report.

The Principal Medical Officer, Surgeon-General J. Sinclair, states that whilst many of the cases were of a light ephemeral type, a large number were very protracted, and developed symptoms not unlike those of enteric fever, and

probably were a mild form of that disease. The medical officer in charge of Valetta remarks that "imprudent exposure to the sun, and abuse of intoxicating liquors, which are so readily obtainable, are a fertile source of those febrile attacks which come under the head of simple continued fever and are of short duration." Malta.

In the Appendix to this Report will be found a valuable paper on the subject of fever in Malta by Surgeon Bruce, who has made a special study of this disease for some considerable time.

Dysentery, now shown separately in this sub-group according to the new method of registration of diseases, caused 53 admissions and 3 deaths, being in the ratios of 11·2 and ·63 per 1,000 respectively as compared with 8·7 and ·43 in the previous year. 46 admissions and one death occurred at Cottonera hospital, 4 and one death at Valetta, and the third death took place at Citta Vecchia. The medical officer in charge at Cottonera reports that "most of these cases were not severe, and yielded readily to treatment. In some cases the disease was contracted in Egypt. In a few the symptoms became chronic, but treatment, with careful dieting, and change to Citta Vecchia, ultimately succeeded, and the men returned to duty. The causes of these cases appear to have been chills, errors in diet and drink, bad unfiltered water, &c."

Other diseases of this sub-group included one of mumps, and three of diphtheria, one of which proved fatal. The cases of diphtheria occurred at Cottonera; the first, that with fatal issue, was admitted from Verdala barracks. The medical officer in charge reports that the man was employed in supervising the cleansing of the latrines, drains, &c., in the barracks, and may have contracted the disease through his employment; no other cause could be discovered. As soon as the nature of the disease was recognised the man was removed to the infectious ward, and all the other patients placed in another ward by themselves, the ward in which the man developed the disease being disinfected. Nineteen days after the death of this man one of the patients who had occupied a bed close to the former developed symptoms of the disease, but the case was of a mild type and the man recovered. Four days after the second case, one of the hospital police, who had not been near either of the other cases, as far as could be ascertained, was found to have symptoms of the disease, but this case was also mild in character and did well.

Malarial Fevers, which in the previous year gave an admission rate of 20·9, and a death rate of ·65 per 1,000, in the year under report show corresponding ratios of only 2·3 and ·21 per 1,000 respectively, which are also considerably below average rates. Of the cases 3 were intermittent fever, and the remainder remittent fever, with one death from the latter.

Septic Diseases are represented by a single case of erysipelas, which did well.

The Principal Medical Officer remarks that the total sickness in the three sub-groups which have been alluded to shows that the health of the troops has been remarkably good, the rate of mortality also being more than proportionately small. "This may, in a measure, be attributable to a very mild summer, but it is believed that the sanitary arrangements and improvements carried out during the period have contributed also to this most satisfactory result." There was no epidemic, which from the fact of cholera being prevalent in several adjacent ports in the Mediterranean is very satisfactory.

In the next sub-group *primary syphilis* shows 89 admissions, equal to a ratio of 18·8 per 1,000. In the preceding year the recorded rate of admission was 37·4, but this included those cases of simple venereal ulcer which are now returned under diseases of the generative system according to the new nomenclature. If in the year under report such cases be added, a ratio of 29·3 per 1,000 is obtained, which compares favorably with the previous year's rate, and also with the average ratio for the preceding five years 40·7.

Secondary Syphilis caused 69 admissions, or a ratio of 14·5 per 1,000, which has declined from that in the preceding year by 7·7, and is also below the average ratio by 1·5.

The admissions for *gonorrhœa* was 260 in number, equal to a ratio of 54·9 per 1,000; in the preceding year the corresponding ratio, that is, including the

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sequelæ, so as to make it comparable with the present method of registration, was 67·1 per 1,000, a decline of 12·2 has therefore occurred; in comparison with the average ratio there is also a decline equal to 17·8.

Including all forms of venereal disease the ratio of admission was 98·7 per 1,000, and that of constant inefficiency on account of these diseases 6·67 per 1,000, as compared with 126·7 and 8·99 respectively in the previous year. In comparison with corresponding average ratios for the previous five years a decrease of 30·7 per 1,000 is observed in the ratio of admission and one of 3·22 in that of constant inefficiency. The amount of sickness and loss of service from venereal disease are therefore much less than in many stations. A proposal having been made to relax the laws existing in the colony for the prevention of contagious diseases, the Principal Medical Officer put forward a strong protest against it, pointing out that the Act has attained its object by preventing the spread of the disease and by mitigating its type, and showing that at present the disease is of mild form and of comparatively small amount.

In the next group of diseases *parasitic* affections caused 6 admissions, all cases of *tænia solium*; and *alcoholism* shows 20 admissions, 2 of which were cases of delirium tremens, all the cases recovered; in the previous year there were 22 cases and 3 deaths.

Debility caused 83 admissions, equal to a rate of 17·5 per 1,000, which is higher than that recorded last year by 7·3, and is also above the average. It is stated that this increase may be attributed to protracted attacks of simple continued fever; most of these cases were sent to the Sanitarium, Citta Vecchia, where all, except six who were invalided, recovered.

Under Group D. are recorded 161 admissions for *rheumatism*, being in the ratio of 34·0 per 1,000, as compared with 50·0 in the preceding year. It is, however, about the average rate; still it is mentioned that the ratio may be considered most favorable, as the rainfall during the year was extremely heavy and has not been equalled since 1879. Only 3 cases of rheumatic fever occurred and all recovered.

Tubercular Diseases show 12 admissions for tubercle of the lung, and 6 deaths from that disease, 5 of which occurred in invalids after they had left the command. In the previous year 34 admissions were registered for tubercular diseases.

Other diseases of this group comprised a few cases of non-malignant growth, one of anæmia and one of epithelioma of the lip, which was successfully removed, as was also a fatty tumour from the cheek.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 30 admissions and 2 deaths, being in the ratios of 6·4 and ·42 per 1,000; the admission ratio is less than half that in the preceding year and is much below the average. Among the cases were 6 of paralysis, 12 of neuralgia, 3 of epilepsy, and 5 of mental disease. The deaths were due to paralysis and mania respectively. The admission rates for *diseases of the eye* and of *the other organs of special sense*, 18·6 and 9·5 per 1,000 respectively, are higher than the corresponding rates in the previous year, while the former is above and the latter below the corresponding average rate. About four fifths of the eye cases were simple conjunctivitis, and most of the ear cases inflammation of the external meatus; many of the latter are said to have been caused by bathing and diving.

Diseases of the Circulatory System caused 64 admissions and one death. The admission ratio, 13·5 per 1,000, has declined from that in previous year by 3·4, and is a good deal below the average. Among the cases were 49 of palpitation and 9 of valve disease of the heart. The death was due to pericarditis.

Diseases of the Respiratory System caused 140 admissions and 3 deaths, two being those of invalids after arrival at home. The admission ratio, 29·6 per 1,000, differs very little from that in the previous year, but is below the average. 98 of the cases were bronchitic affections, and among the remainder were 22 cases of pneumonia and 7 of pleurisy. Of the deaths two were returned as pneumonia and one as pneumonic phthisis.

Diseases of the Digestive System.—Under this head 463 admissions and 2 deaths are returned, being in the ratios of 97·8 and ·42 per 1,000. The admission ratio is not exactly comparable with that of the preceding year,

owing to dysentery being recorded elsewhere according to the new registration; but even if allowance is made for this it will be found that digestive disorders decreased in prevalence in the year under report. The principal causes of admission were affections of the mouth and throat, dyspepsia, and diarrhoea, and there were 57 cases of hepatic disease, including two of abscess of the liver and 29 of jaundice. Both the cases of liver abscess proved fatal. Aspiration was performed in one case but without good result.

Diseases of the Lymphatic and Glandular System.—29 admissions are recorded for inflammation or suppuration of lymphatic glands. The admission ratio was 6·1 per 1,000.

Diseases of the Urinary System show only 6 admissions, or 1·3 per 1,000. This difference from last year's rate is, of course, due to the removal of diseases formerly shown under this head to other group and orders. On this account the *diseases of the generative system* show a greatly increased ratio as compared with last year, from 13·7 to 28·9 per 1,000, the increase being chiefly due to the transfer of diseases of the urethra and prostate as well as of simple venereal ulcers to this system.

Diseases of the Organs of Locomotion caused 21 admissions, or 4·4 per 1,000, a decline from the rate in the previous year. The cases do not call for special mention, but one death occurred in an invalid from lumbar abscess.

Diseases of the Connective Tissue, with a ratio of admission of 36·1 per 1,000, were much less frequent than in the previous year, though about the average.

Diseases of the Cutaneous System were also much less frequent than in the preceding year, the admission ratio, 48·8 per 1,000, showing a decline of 3·55; it is also much below the average rate. None of the diseases treated call for special allusion.

Injuries.—One admission is recorded for multiple injury. It occurred at Fort Chambray hospital at Gozo, and was the result of a fall from the roof of the barracks on to the square below. It was supposed that the man was walking on the roof to cool himself, the night being very oppressive, and that he fell over; he died seven hours afterwards. One death by drowning took place through the upsetting of a boat off Fort Delimara. The number of admissions for local injuries was 459 and there were two deaths, being in the ratios of 96·9 and 42 per 1,000. The admission rate shows that injuries were somewhat less frequent than in the preceding year. The principal causes of admission were contusions, wounds, and sprains, and there were 14 cases of fracture, 5 of dislocation, and 2 of concussion of the brain. The causes of death were concussion of the brain and fracture of the base of the skull. The former was the result of a fall over a bastion, a distance of over 40 feet on to the rocks below; the latter was the result of a fall over a parapet on to some steps below, a distance of about 6 feet only.

Invaliding.—The number of men invalided to England was 77, equal to a ratio of 16·25 per 1,000, which is below that in the preceding year by 10·69, and below the corresponding average rate for the previous 10 years by 12·50. The principal causes of invaliding were fevers, 13 cases, or 2·75 per 1,000 of strength; tubercular disease of the lung and cardiac disease, each 11 cases, or 2·32; debility, 6 cases, or 1·27; and mental disease and respiratory affections, each 5 cases, or 1·06 per 1,000.

The number of men finally discharged the service by invaliding was 59, being in the ratio of 12·45 per 1,000 of strength, which is fractionally higher than the corresponding rate in the previous year, but lower than the decennial average rate by 2·77. The chief diseases causing discharge by invaliding were diseases of the circulatory system, 15 cases, equal to 3·17 per 1,000 of strength; diseases of the nervous system, 17 cases, or 3·59 (including 9 cases, or 1·90 per 1,000, for mental diseases); tubercular diseases, 7 cases, or 1·48; rheumatism, 4 cases; and disorders of the respiratory system, 4 cases, or 0·84 per 1,000.

With regard to the effect on invaliding of age, and of length of service in the Command, it is observed that the invaliding rate of men under 20 years of age was 11·36 per 1,000, between 20 and 25 years 15·61, between 25 and 30 years 20·16, and over that age 18·15; among those in their first year's service in the Command, the invaliding ratio was 17·21 per 1,000, in the second year's service, 13·95, in the third year, 13·60, &c.

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Officers.—The average strength of officers was 150; there were 106 attacks of illness, but no death, and 8 officers were invalided. The ratio of prevalence of sickness was 706·6 per 1,000, an increase on the rate in the previous year of 171·4; it is, however, rather below the admission rate among the non-commissioned officers and men. The invaliding ratio was 53·33 per 1,000, nearly the same as in the foregoing year; 43 of the attacks were due to fevers, of these two cases were enteric fever; and of the remainder 12 were cases of disorders of the digestive system; there were also 22 instances of injury. The causes of invaliding were simple continued fevers 3 cases, debility 2 cases, and enteric fever, melancholia, and synovitis, one case respectively.

Women.—The average strength is given as 280; there were 207 admissions and 3 deaths. The ratio of prevalence of sickness was 739·3 and that of mortality 10·71 per 1,000, which compare favorably with the corresponding ratios in the preceding year, 808·7 and 20·13 per 1,000 respectively. The principal diseases were fevers, 55 cases, of which two were enteric fever, two remittent fever, and the remainder simple continued fever. There were also 42 cases returned as debility, 10 rheumatism, 17 bronchitis, 43 disorders of the digestive system, 19 diseases of the generative system or connected with pregnancy, &c. The deaths were due to enteric fever, rheumatic fever, and bronchitis one case of each.

Children.—The average strength of children is returned as 486; among these there were 344 cases of sickness and 24 deaths. The ratio of prevalence of sickness was, therefore, 707·8, and that of mortality 49·38 per 1,000, which are considerably lower than the corresponding rates in the preceding year, which reached 974·0 and 105·78 per 1,000. Among the cases treated were 44 cases of simple continued fever, 33 of debility, 65 of bronchial affections, 74 of diarrhoea, 38 of other disorders of the digestive system, 3 of diphtheria, &c. The causes of death were debility and diarrhoea, of each 4 cases; bronchitis, remittent fever, and dysentery, of each 2 cases; and diphtheria, encephalitis, *ascaris lumbricoides*, atelectasis, tonsillitis, enteritis, hepatitis, cervical abscess, premature birth, and scald, one case respectively.

Sanitary Conditions.—The Principal Medical Officer, speaking of the causes which contributed to the satisfactory condition of the health of the troops and their families during the year 1886, remarks that, "without doubt, the most prominent place must be assigned to the many important sanitary improvements which have been effected in the island during the last few years.

"Valetta, Floriana, and the crowded cities on the Cottonera side of the Grand Harbour have been thoroughly drained, the sewage being conveyed in glazed earthenware pipes to San Rocco, on the eastern side of the island, where it is discharged into the sea at a considerable distance from the harbours.

"An abundant supply of pure water for drinking purposes has been introduced into the chief towns and villages, the aqueduct water being now conveyed from the springs and sources in the Bengemma hills in iron pipes, and distributed to the numerous public fountains which have been erected in the towns and villages along its course, also to the private houses of persons wishing to be supplied with it, at a comparatively small expense, a nominal sum being paid for every 1,000 gallons consumed in excess of the regulated allowance of three gallons per head per diem supplied free.

"Cleanliness has been enforced amongst the people (especially in the towns in which inspectors of nuisances have been appointed to look after the sanitary condition of streets and dwellings), limewashing, improved drainage and removal of all rubbish likely to produce disease being insisted on.

"The early declaration and isolation of all cases of infectious disease have also been directed. Sanitary measures of such paramount importance cannot fail to produce a most marked effect upon the health and well-being of the population, both civil and military, and it is observed by the medical officer in charge, Royal Malta Fencible Artillery, that *pari passu* with the sanitary improvements which are being gradually carried out, the sick in garrison, as well as the mortality among the civil population, have been on the decrease.

"The barracks and forts in Malta are numerous and widely scattered; *Malta.* many are old, faulty in construction and position, with defective ventilation; the sanitary condition of the vicinity of some (being surrounded by dirty, closely-packed, overcrowded houses) is also very objectionable. Every effort has, however, been made to have all sanitary defects, as far as possible, rectified and to keep the barracks in as healthy a condition as practicable.

"Cleanliness in and about barracks has been strictly attended to. The means of ablution and bathing have been satisfactory, and during the summer months bathing parades have been held; and with a view of giving increased space and area in barracks during those months half the men occupying each room slept under canvas at night.

"The rations have been of good quality and were well cooked. An abundant supply of fruit and vegetables was always procurable. The clothing of the men has been good and suitable, and the bedding has been good and kept well aired in accordance with the regulations. The duties have not been excessive and have had good effect on the men. Gymnastics were regularly carried out under proper supervision and have had beneficial effect on the physique of the troops."

The following are the principal sanitary improvements which were carried out during the year:—In the Cottonera division provision of new drains at Burmola married quarters, the canteen at Isola Gate, and to new barrack-room at Cottonera hospital; also improvements in the drainage of Ricasoli barracks, and in the ventilation of the drains at the officers' quarters, Isola Gate, and at Polverista barracks.

In the Valetta division the following were carried out or were in course of completion:—Improvements in ventilation of the barrack rooms at St. James's, Cavalier, and of the medical officers' room at Valetta hospital, also improvements in ventilation of the Pavilion, Floriana. Provision of urinals at the canteen, St. Francis barracks, and improvements in latrine accommodation at Upper St. Elmo Cavalier, and the Auberge de Castille.

In the west division improvements to the water conduits of Nos. 1 and 3 tanks at Pembroke camp were being carried out, and also the erection of temporary latrines at Fort Musta.

Among the services proposed for the succeeding year were improvements in ventilation in certain rooms at Ricasoli and Salvatore barracks; also at the Auberge de Baviere and St. James's Cavalier. Conversion of water latrines into dry earth closets at Forts Leonardo, Ta Sile, San Lucian, and Delimara, as well as at several others. Connexion of the drainage system of Fort Lascaris with the main drainage.

ROYAL MALTA FENCIBLE ARTILLERY.

The average annual strength of this corps was 359 non-commissioned officers and men, and the accompanying table shows the chief statistics of their sickness and mortality:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admission.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
359	254	—	—	—	—	5	8.92	707.5	—	—	15.92	24.84

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The admission ratio compares very favorably with that in the preceding year, 821·5 per 1,000, but it is above the average ratio for the preceding 10 years by 42·2 per 1,000. The rate of constant inefficiency through sickness is lower than the previous year's rate by 1·76 and than the decennial average rate by ·52 per 1,000. The ratio of mortality was *nil*. The average sick time to each soldier was 9·17 days, which is shorter than in the previous year by about half a day and by a small fraction than in the corresponding average period for 10 years; while the average duration of each case of sickness, 12·81 days, is longer in the former comparison by a day, and shorter in the latter by rather over a day.

The admissions and deaths in the different orders of diseases are shown in Abstract IIIA.

GENERAL DISEASES.—Specific Febrile Diseases.—In the first sub-group are recorded 37 admissions for simple continued fever, equal to a ratio of 103·1 per 1,000, which is lower than the corresponding ratio in the preceding year by 27·2 per 1,000. Most of the cases were mild in character, only 6, it is said, being severe and followed by protracted convalescence.

In sub-group 4 are shown 6 admissions for primary syphilis, 3 for secondary syphilis, and 6 for gonorrhœa, these 15 cases giving a ratio of 41·8 per 1,000; rather below that in the previous year.

In Group D. are returned 16 admissions, 11 for rheumatism, one for tubercular disease of the lung, two for anæmia, and two for non-malignant growths, a fibrous tumour of upper jaw, and a polypus of the ear, both of which were successfully removed by operation.

LOCAL DISEASES.—Most of the orders of local diseases caused very few admissions, and some none at all. Those causing most sickness were diseases of the respiratory, digestive, and cutaneous systems. There were 38 attacks of respiratory disease, of which 5 were cases of pneumonia and the remainder bronchitis; 40 admissions for digestive diseases, principally affections of the throat and dyspepsia, a few cases of the former being rather severe; and there were 31 admissions for cutaneous disease of ordinary character. One case of ingrown nail and one of wen of neck required removal by operation.

The admissions for injuries numbered 54, equal to a ratio of 150·4 per 1,000, being less frequent than in the previous year. It is stated that none of the cases were serious. Among the cases of wounds was one in which a man was stabbed in the abdomen by a civilian, but the wound did not appear to have penetrated the peritoneal cavity, and was doing well at date of report.

Invaliding.—Five men were discharged by invaliding, equal to 13·92 per 1,000, which, though above the previous year's rate, is below the average. The disabilities necessitating discharge were secondary syphilis, debility, tubercular disease of the lung, valve disease of heart, and the effects of an injury.

Officers.—The average strength was 19, and there were 19 attacks of illness, none of which, however, were sufficiently serious to require special notice.

Women and Children.—In an average strength of 38 women there were 13 attacks of illness, of which none were fatal, and very few of a serious nature. The average strength of children was 123; among these there were 49 attacks of illness and 3 deaths. Diarrhœa and simple continued fever were the principal causes of sickness. Two deaths occurred from diarrhœa and one from pneumonia.

Sanitary Conditions.—The medical officer in charge, Surgeon L. Manché, M.D., is of opinion that the accommodation for the detachment at St. Antonio's Gardens is not satisfactory. A suitable kitchen is required away from the men's barrack rooms, and improvements in watercloset arrangements are necessary.

A barrack room at Fort Lascaris is used as a schoolroom; it is said to be badly lighted, too small, and unfit for the purpose, owing to the noise in the vicinity.

With regard to rations a radical change was effected during the year. The medical officer had been trying to get the men supplied with a daily free meat ration instead of only four times a week. It has been decided to discontinue

all free rations, and in lieu to give each man 4*d.* per diem. The medical officer states that this arrangement pleases the men, and will tend to encourage enlistment, but he doubts its advisability in a medical point of view. *Malta.*

Recruiting.—Out of 85 recruits inspected during the year 48 were found fit for service and the remainder rejected. Among the causes of rejection were 14 for being under chest measurement, 8 for defective vision, and 6 for heart disease. Of the men inspected 65 were labourers, 14 tradesmen or mechanics, 3 students or clerks, and 3 boys under 17 years of age. With regard to education 2 men are returned as well educated, 22 as able to write, one as able to read only, and 60 as unable to read. Omitting boys under 17 years of age, the number of recruits inspected was 82, among these the average age was 20·1 years, the average height 5 feet 5½ inches, the average weight 122·4 lbs., and the average chest measurement 32½ inches.

III.—CYPRUS.

The force serving in Cyprus during the year was composed of the headquarters and half of the 3rd Battalion King's Royal Rifle Corps, which was relieved at the beginning of June by the headquarters and half the 1st Battalion Royal Berkshire Regiment; there were detachments of Departmental Corps and Garrison Staff throughout the year, and convalescents from Egypt *Cyprus.*

The average strength of the troops was 636; the sickness and mortality among them is shown in the following table:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
636	682	7	—	7	7	—	32·52	1072·3	11·00	11·00	—	50·81

Compared with corresponding ratios in the previous year a very slight decline, 5·1 per 1,000, is observed in that of admission, but there is a decrease of 10·13 in that of mortality, while there is an increase of 7·21 in the rate of men constantly in hospital. In comparison with average similar ratios for the preceding seven years there is an increase of 104·7 per 1,000 in admission rate, and one of 8·86 in that of constantly sick; in the death rate, however, there is a decline of 2·14. The average sick time to each soldier was 18·54 days, and the average duration of each case of sickness 17·29 days, being longer than the corresponding periods in the preceding year by 2·63 days and 2·49 days, and longer than the average of these periods in the previous seven years by 3·23 days and 1·47 days respectively.

The stations occupied by the troops were Polymedia, Limassol, Nicosia, and Mount Troodos; the three former up to the middle of June and after the beginning of October, between which all the troops, except a few necessarily left at the depôt, Limassol, were quartered on Mount Troodos.

In Abstract XLII. are given the more important of the health statistics of the different corps. The high ratios of sickness and mortality among the convalescents from Egypt will be noticed, but this, as remarked by the Senior Medical Officer, Brigade Surgeon G. Elmsley Will, is not to be wondered at considering that the greater number of these men were in a very debilitated condition on arrival, and some were actually suffering from disease.

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All the deaths occurred among these convalescents. The 1st Royal Berkshire Regiment, also shows a high annual admission rate, 1,180 per 1,000; this is due also to the regiment having just served in Egypt, whence it arrived in June. The King's Royal Rifle Corps which had been a long time in the island gave an annual ratio of admission equal to 890·1 per 1,000. The health of the Garrison Staff and departments was also good.

With regard to the influence of age on the occurrence of sickness, it is observed that the ratio of admission of men between 20 and 25 years of age was 1251·4 per 1,000 and those between 25 and 30 years 805·4. Under 20 years the ratio was 1115·4, but this is dependent on a small average strength, so is not of much value.

The admissions and deaths in the different groups and orders of diseases are shown in Abstract IV.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—Specific Febrile Diseases.—In the first sub-group *eruptive fevers* show one admission for scarlet fever which occurred in the convalescent camp at Mount Troodos, the origin of the case could not be traced. *Enteric fever* caused 11 admissions and 5 deaths, being in the ratios of 17·3 and 7·86 per 1,000 respectively. Nine of the cases occurred in men from Egypt shortly after arrival, the disease evidently having been contracted in that country; of these cases, 2, one of which was fatal, occurred at Polymedia, and 7, with 3 deaths, at Troodos. The remaining two cases occurred also among the troops from Egypt, but some time after they arrived. One case was that of a man of the Royal Berkshire Regiment, who was admitted at Troodos two months after having landed from Egypt, and the other was that of a convalescent at Polymedia three days after his return from Troodos in October. These are the only two cases in which it could be said that the disease was contracted in the island, but it was impossible to trace their origin. The last-mentioned case was fatal. *Other continued fevers* gave 85 admissions, at the rate of 133·6 per 1,000 as compared with 99·8 in the previous year, the ratio is also considerably above the average of the preceding five years. The cases were all returned as simple continued fever; 67 of them occurred at Polymedia, all but six during October and the early part of November, immediately after the return of the troops from the hills. The Senior Medical Officer considers that this large amount of sickness was to a great extent due to exposure of the men on the rifle range or on fatigue, and in some measure to the proximity of the Salt Lakes, which are only 2½ miles from Polymedia Camp. He recommended that the men should not be employed between 9 a.m. and 4.30 p.m.; this was carried out and was attended with some benefit, but it was not until after the end of October when rain fell, filling the lakes, that the admissions began to show marked diminution.

Dysentery caused 22 cases and one death, the respective ratios being 34·6 and 1·57 per 1,000. In 21 of the cases it is said that the men had suffered from the disease while in Egypt, and the remaining case occurred on the march from Troodos to Polymedia in a weakly man who had been a long time in hospital; the disease was probably induced by a chill.

In Sub-Group II. *malarial fevers* show 102 admissions, equal to a ratio of 160·4 per 1,000, which is below the rate in the preceding year by 50·9, and is also below the average rate. 57 of the cases occurred at Polymedia, 43 at Troodos, and 2 at Nicosia; of the cases at Troodos, two are returned as remittent fever. It is said that many of the men who had previously suffered from ague were attacked after exposure or chill, but some suffered for the first time at Polymedia, among whom were three recruits from home.

In the group of *septic fevers*, 3 cases of erysipelas are returned, which were admitted from the convalescent camp at Troodos, and were induced by cold acting on men debilitated by active service.

In Sub-Group IV. *syphilis* shows 92 admissions for primary, and 23 for secondary disease, being in the ratios of 144·6 and 36·2 per 1,000 respectively. Under the new method of registration of disease the admission ratio for primary syphilis is not generally comparable with those of former years, unless the admissions for simple venereal ulcers be added; in this instance, however, the latter were so few, three only, as to make a very trifling difference in the ratio, increasing it to 149·3 per 1,000, which is twice the average rate as well as

twice the corresponding rate in the previous year. The ratio for secondary syphilis is lower than that in the preceding year by 3·7, but is above the average rate. The admissions for gonorrhœa were 32 in number, the ratio being 50·3 per 1,000, lower than in the previous year by 7·2, and a good deal below the average rate. Including all forms of venereal disease, the total ratio of admission was 235·8 per 1,000, that in the previous year being 162·0, and the quinquennial average rate 168·9. The ratio of constant inefficiency from these diseases was 16·01 per 1,000 as compared with 8·63 in the previous year, and with 10·37, the average rate.

In the next group of diseases three instances of *parasitic disease* are recorded, cases of *tænia solium*; 3 cases returned as *scurvy*, two of which were convalescents from Egypt, who showed a scorbutic taint, and 4 cases of *alcoholism*. 23 cases of *debility* are returned, equal to a ratio of 36·2 per 1,000, which is above the average, but a good deal below the last year's rate; all the cases were the result of sickness caused on service in Egypt.

The only diseases under Group D. which caused admissions were rheumatism and *tubercular disease* of the lung, one case of the latter and 18 of the former. The ratio of admission for rheumatic affections was 28·3 per 1,000, such cases being more prevalent than usual; among them were 3 cases of rheumatic fever, two of which were severe, but recovered.

LOCAL DISEASES.—*Diseases of the Nervous System* caused only 4 admissions, or 6·3 per 1,000; the cases comprised one of paralysis, epilepsy, neuralgia, and idiocy respectively. *Ophthalmic* affections were 9 in number, or 14·1 per 1,000, 8 cases of conjunctivitis and one of iritis, all of a mild type. *Diseases of the circulatory system* caused but a single admission; this was a case of valve disease of the heart, which proved fatal. *Respiratory affections* comprised 2 cases of pleurisy, one of pneumonia, and 8 of bronchitis; the admission rate, 17·3 per 1,000, is lower than in the previous year by 13·2, and is below the average. The Senior Medical Officer states that most of these cases were due to the great daily range of temperature at Mount Troodos and the neglect of the men regarding warm clothing in the evening. *Diseases of the digestive system* caused 86 admissions, equal to 135·2 per 1,000, which is a lower ratio than in the preceding year by 52·6, but is rather above the average rate. The principal causes of admission were dyspepsia, diarrhœa, and hepatic affections. It is said that many men who had suffered from such affections in Egypt became affected again through chills and errors in diet. Of the remaining orders of local diseases, *cutaneous affections*, and *diseases of connective tissue* caused the greatest frequency of admissions, the ratios being 48·7 and 33·0 per 1,000 respectively, the former being lower, but the latter higher than the corresponding rate in the previous year.

Injuries caused 69 admissions, or 108·5 per 1,000, which is above the average rate of frequency. Sprains, wounds, and contusions were the causes of 51 of the admissions, and among the remainder were 4 cases of fracture and 3 of dislocation.

Invaliding.—Seven men were invalided to England, being in the ratio of 11·00 per 1,000, an increase of 2·79 on the rate in the previous year, but below the average rate by 10·22. The causes of invaliding were enteric fever 2 cases, debility, 2, and ague, hepatitis and contracted tendons, one case respectively. There were no men finally discharged by invaliding during the year.

Officers.—The average strength was 31, and there were 17 attacks of illness, among which were 8 cases of fever, 2 necessitating invaliding, 4 cases of injury, one of tubercular disease of the lung with fatal result, one of dysentery, &c. The ratio of prevalence of sickness was equal to 548·4 per 1,000.

Women.—In an average strength of 27 there were 54 cases of illness. Of the cases, 10 were ague, 6 remittent fever, and 17 disorders of the generative system. No death occurred.

Children.—44 admissions are returned in an average strength of 50 children, equal to a sick rate of 888·9 per 1,000, higher than the previous year's rate.

There were among the cases 10 of fevers, principally ague, 15 cases of digestive disorder, and 6 of ophthalmic affections. One death occurred from dysentery.

Cyprus.

Sanitary Conditions.—The Senior Medical Officer reports that the sanitary arrangements at Mount Troodos were highly satisfactory; great attention was given to the cleanliness of the camps, to ventilation of the tents, and to the latrine arrangements and disposal of excreta.

The hospital accommodation consisted of double-poled tents, Indian pattern, in place of the hospital marquees hitherto used; this was found to be a great improvement, as the double-poled tents are warmer in cold weather and cooler in hot weather, and from their shape and size are better adapted for the treatment of the sick. It was found advisable to convert the hospital from a non-dieted to a dieted hospital owing to the ordinary rations being unsuited to the cases admitted. The means of cooking were rough, but the diets were well cooked and served.

The water supply was abundant and of good quality.

At Polymedia it is said that the general sanitary condition was excellent, and that all the arrangements in this camp were very satisfactory.

The camp at Limassol is also reported to be in good sanitary condition, except as regards the ablution and bath accommodation, but this was being improved.

The proximity of the Salt Lakes to Polymedia and Limassol is said to be objectionable, being the cause of a good deal of fever, which renders these places undesirable as permanent stations for troops. The Senior Medical Officer points out the advisability of the erection of permanent barracks at the height of from 3,000 to 4,000 feet above sea level, where the troops could be kept all the year round.

IV.—ON THE HEALTH OF THE TROOPS SERVING IN THE DOMINION OF CANADA.

Sickness and Mortality.

The average strength of the troops quartered in Halifax, which is the only station occupied by Imperial troops, was 1,283. The troops comprised three batteries Royal Artillery, one company and a torpedo section of Royal Engineers, a regiment of infantry, detachments of Departmental Corps, and Garrison Staff.

The following changes were carried out in the month of October :—The headquarters section, 27th Company Royal Engineers, from England, in relief of the section 4th Company Royal Engineers; and the 2nd Battalion York and Lancaster Regiment from Bermuda, in relief of the 2nd Battalion Royal Irish Rifles. Drafts for the different corps arrived during the year.

In the subjoined table are shown the chief statistics of sickness and mortality among the troops during the year :—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,283	751	3	—	3	23	20	38·77	585·3	2·34	17·93	15·59	30·22

All these ratios show a marked decline as compared with those of the preceding year, being 129·5 per 1,000 in admission rate, 5·52 in death rate, and 10·78 in constantly sick rate. In comparison with similar average rates for the preceding 10 years the decrease in admission rate is equal to 141·3, that in the mortality rate 3·18, and that in the rate of constant inefficiency 7·97 per 1,000.

The average sick time to each soldier was 11·02 days, and the average duration of each case of sickness 18·84 days, which are shorter than the corresponding periods in the preceding year by 3·94 and 2·09 days, and than the decennial average periods by 2·92 and ·34 days respectively.

The most important of the statistics of the health of the different corps will be found in Abstract XLII. The highest ratios of sickness and mortality are observed in the 2nd Battalion York and Lancaster Regiment, which, however, was only the last two months of the year in the garrison; the admission rate was 848·1, the death rate 6·32, and the constantly sick rate 35·12 per 1,000. In the other infantry regiment which was relieved, the 2nd Battalion Royal Irish Rifles, the ratio of admission was 591·8, that of mortality 3·14, and that of constant inefficiency 33·26 per 1,000. The admission rate for the Royal Engineers was the lowest, being only 400·0 per 1,000.

With regard to the influence of age on sickness it is calculated that the ratio of admission to strength in the year under report was for men under 20 years of age 459·9 per 1,000; between 20 and 25 years of age 815·9; between 25 and 30 years 438·7, and over that age 257·5 per 1,000.

The admissions and deaths in the different groups and orders of diseases are recorded in Abstract V.

Canada.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—*Eruptive fevers* show one admission only, a mild case of scarlet fever, and *continued fevers* only 10 admissions for simple continued fever; there was no case of enteric fever, and the Principal Medical Officer, Deputy Surgeon-General W. Cattell, states that to his knowledge there was no occurrence of this fever among the civil population in the city during the year. *Septic diseases* show six cases of erysipelas, chiefly of the head and face, all of which recovered.

Primary syphilis caused 43 admissions, equal to a ratio of 33·5 per 1,000, which is considerably below the corresponding ratio in the previous year, and is also below the average rate. *Secondary syphilis*, with a ratio of 34·3 per 1,000, has also declined as compared with the foregoing year, but is still about the average. The proportion of secondary to primary syphilis is still very high. Gonorrhœa caused an admission ratio of 79·5 per 1,000. In this also there is a considerable decrease as compared with the previous year and with the average ratio. The ratio of admission for all forms of venereal disease was 150·4 per 1,000, and the ratio of constant inefficiency on account of these diseases was 9·73, which compare favorably with 226·2 and 15·22 in the preceding year, and with the average ratios for five years, 219·4 and 14·00 per 1,000 respectively.

In the group of diseases not classified, *rheumatism* was the only disease, with one exception, a case of non-malignant growth, which caused admission. The ratio of admission was 35·8 per 1,000, which is less than in the preceding year and than the average rate. Among 46 cases treated 3 were cases of rheumatic fever, all of which recovered.

LOCAL DISEASES.—*Diseases of the Nervous System* caused an admission ratio of 10·9 per 1,000, which is lower than the previous year's ratio, but a little above the average. Among the cases were one of dementia, one of locomotor ataxy, and three of epilepsy. *Ophthalmic affections*, with a ratio of 13·2 per 1,000, were more frequent than in the previous year, but less than the average. Most of the cases were simple conjunctivitis. The admissions for *diseases of the circulatory system* were only 17 in number, 3 being for valve disease, 2 for hypertrophy of the heart, and 3 for dilatation of the aorta. The ratio of admission, 13·2 per 1,000, has increased by 5·3 as compared with the preceding year, but is about the average. *Respiratory affections* caused 47 admissions and 2 deaths, being in the ratios of 36·6 and 1·56 per 1,000 respectively. The rate of prevalence is, however, but little more than half that in the previous year, and is considerably below the average rate. This decline is said by the Principal Medical Officer to be due to the comparative mildness of the climate during the year. About half the cases were bronchial affections, and among the rest there were 9 cases of pneumonia, one fatal, 5 of pleurisy, and 4 of pneumonic phthisis, one being fatal.

Diseases of the Digestive System caused 112 admissions, being in the ratio of 87·3 per 1,000 as compared with 95·8 in the previous year; it is also below the average. 62 of the cases were follicular tonsillitis, most of which occurred in the extreme winter months; among the remainder were 13 other cases affecting the mouth and throat, and 19 cases of dyspepsia.

Among the remaining orders of local diseases, those causing most admissions were *diseases of the generative system*, the ratio being 23·4, *diseases of the connective tissue* 21·8, and *cutaneous affections* 54·6 per 1,000. The latter were more frequent than in the previous year, but the cases do not call for special allusion.

Injuries were rather less frequent than in the preceding year, 103 being recorded. The majority of the admissions were for contusions, wounds, and sprains; there were also four for fractures and two for dislocations. The Principal Medical Officer is of opinion that many of the admissions for injuries, as well as for dyspepsia, were the result of intemperance, but he calls attention to the unusual absence of any cases of alcoholism during the year. One man died out of hospital from asphyxia from plugging of the air passages when drunk.

Invaliding.—27 men were invalided during the year, of whom 4 were discharged in the country and 23 sent home. The ratio of the latter was 17·93 per 1,000 of strength, below the corresponding ratio in the previous year by 8·78, and below the decennial average rate by 6·72. The principal causes of invaliding were heart disease 5 cases, debility 5, pneumonic phthisis 3, and

nervous affections 3 cases. The number of men finally discharged was 20, equal to 15.59 per 1,000 of strength; this ratio is below that in the preceding year by 11.91, and below the average rate for the previous 10 years by 2.68. The chief disabilities necessitating discharge were diseases of the circulatory and respiratory systems, and nervous or mental affections. *Canada.*

Officers.—The average strength was 63; among them there were 19 cases of sickness, equal to a sick rate of 301.6 per 1,000, which is lower than in the previous year by 62.0. The principal causes of illness were follicular tonsillitis and rheumatism. One officer suffering from hæmoptysis was invalided to Bermuda for a few months with beneficial result.

Women.—The average strength of women was 96, and there were 37 cases of sickness with one death. The ratio of prevalence of sickness was 385.4 per 1,000, being lower by 64.0 than the corresponding ratio in the previous year. Debility and diseases of the generative system were the principal causes of sickness. The death was due to puerperal peritonitis.

Children.—In an average strength of 186 children there were 60 attacks of illness and 7 deaths, being in the ratios of 322.6 and 37.63 per 1,000 as compared with 289.6 and 60.11 respectively in 1885. Among the cases treated were 5 of scarlet fever, 7 of other fevers, and 16 of respiratory diseases. Three of the deaths are returned as resulting from constitutional syphilis, two from diarrhoea, one from simple continued fever, and one from pleurisy.

Sanitary Conditions.—The Principal Medical Officer remarks that the general health of the troops was very good during the year, and was not affected by any insanitary cause. The sanitary conditions of the various barracks and occupied quarters were satisfactory, and were carefully supervised.

The means of ventilation are reported to be ample, the water supply to be good and abundant, and ablution accommodation satisfactory. The clothing of the men was satisfactory, and was adapted to the variable conditions of the climate at the discretion of commanding officers.

The present mode of heating the hospital is said to be objectionable and defective; the large wards, in which are Galton's stoves, required the addition of small stoves. It has been strongly recommended that the whole of the building should be heated by means of hot-water pipes, and estimates have been prepared for this. It is thought that the initial expense of this change would, in a few years, be covered by the saving in fuel, as the amount consumed under present arrangements is very great.

The necessity of wards for infectious cases among women and children is again brought forward, as it is said the building now used is inconvenient and is quite uninhabitable in winter.

Several minor alterations and improvements to the barracks were carried out during the year, and among them the provision of a new range to the hospital kitchen.

The climate during the winter months was unusually mild and clear, and the summer was earlier and without fog. The autumn was very fine, and was prolonged into December, when sudden cold lowered the temperature to 15° below zero (the lowest point it has reached for seven years), but the atmosphere was fine and clear.

V.—ON THE HEALTH OF THE TROOPS SERVING IN BERMUDA.

Sickness and Mortality.

Bermuda.

The corps which served in the Bermuda Command during the year were two batteries of Royal Artillery, detachments Royal Engineers, a regiment of Infantry, detachments Departmental Corps and Garrison Staff. The following changes took place in the month of October; the batteries of Artillery were relieved by other two batteries from England, and the 2nd Battalion York and Lancaster Regiment left for Halifax, Nova Scotia, on relief by the 2nd Battalion West Riding Regiment from England.

The average strength of warrant officers, non-commissioned officers and men was 1,227.

The following table shows the principal health statistics of the troops during the year :—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,227	781	15	—	15	20	20	42·30	636·5	12·23	16·29	16·29	34·47

Compared with the results in the preceding year, the ratio of admission has increased by 142·6, and that of constantly sick by 6·43 per 1,000, but there is a fractional decrease in the death rate. In comparison with the corresponding average ratios for the preceding 10 years there is a slight increase, 8·7 per 1,000, in the admission rate, a fractional increase in the rate of average daily sick, and an increase in the mortality rate equal to 4·65 per 1,000.

The average sick time to each soldier was 12·58 days, and the average duration of each case of sickness 19·77 days, the former being longer than the corresponding period in the previous year by 2·35 days, and the latter shorter by nearly one day. In comparison with decennial average periods the difference is only fractional in each case.

The principal health statistics of the corps which served in the garrison during the year are given in Abstract XLII.

The highest ratio of admission was 1483·0 per 1,000 in the 2nd West Riding Regiment, and the highest ratio of constant inefficiency also, 69·83 per 1,000, but this corps was so short a time in the garrison that the average annual strength was small. The admission and constantly sick rates in the regiment, which was relieved towards the end of the year, the 2nd York and Lancaster, were only 559·6 and 32·75 per 1,000 respectively. In this corps the death rate was 9·17 per 1,000, dependent on 6 deaths, of which two were cases of enteric fever and two of pneumonia. The ratios of admission and average daily sick in the Artillery were low, but the mortality rate was high, 5 deaths having occurred, of which three were due to violence. The sick rates in the Engineers were not high, and those in the Garrison Staff and Departments were low.

With regard to the influence of age, and of length of service in the command, *Bermuda*. on the occurrence of sickness it is calculated that the admission rate during the year of men under 20 years of age was 353·0 per 1,000, between 20 and 25 years 750·0, between 25 and 30 years 746·8, and over that age 352·0 per 1,000. Mortality was greatest between 25 and 30 years of age, and was *nil* under 20 years. Of men who were under one year's service in the command the admission rate was 356·0 per 1,000, of those between 1 and 2 years' service the rate was very high, 1253·2, of those between 2 and 3 years it fell to 570·4, and increased again in men over that time. It must be noted with regard to these ratios that between 1 and 2 years the average strength was low, and that about half the average strength of the force was under one year's service in the Command. The mortality rate in the first year of service was low, in the second it rose slightly, in the third it declined again, but rose afterwards.

The admissions and deaths in the various groups and orders of diseases are shown in Abstract VI.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—Continued fevers and dysentery were the only diseases in the first sub-group of these affections which caused admissions.

Enteric Fever, which in the preceding year caused 29 admissions and 10 deaths, shows in the year under report 28 attacks, with, however, only 4 deaths; therefore, though the attacks were nearly as numerous, the per-centage of mortality to cases fell from 34 to 14. The ratio of admission to strength was 22·8 and of mortality 3·26 per 1,000 as compared with 20·9 and 7·22 in the previous year, and with 18·3 and 3·78, the corresponding average ratios for the preceding five years. 24 of the cases and 3 of the deaths took place at Prospect, and 4 and 1 death at St. George's. The Principal Medical Officer, Deputy Surgeon-General C. Graves-Irwin, M.B., states that "enteric fever" again appeared among the troops as usual after the heavy rains, and the "new arrivals in the Command in October furnished a number of admissions within a short time of landing. While there is no appreciable cause for this disease within military limits, the highly insanitary condition of the civil surroundings and the continued presence of the disease among the civil residents, lead to the belief that it is contracted by the troops from causes outside barracks." He further states that "the majority of cases among the troops have been traced to residence, continuous or occasional, in the town of Hamilton, either on duty or for purposes of recreation, and this is apparently borne out by the infrequency of the disease among the women and children, who rarely leave the precincts of their quarters."

Other continued fevers caused 25 admissions, all for simple continued fever, the ratio of admission was 20·4 per 1,000, which is almost the same as that in the preceding year, and is only about two thirds of the corresponding average rate.

Dysentery was the cause of 6 admissions, 4 of which occurred at Prospect, one having a fatal termination; the other two took place at St. George's. The ratio of admission was 4·9 and that of mortality ·81 per 1,000. Most of the cases were mild.

In sub-group 4 *primary syphilis* shows 28 admissions, equal to 22·8 per 1,000; the ratio in the previous year 26·0, appears higher, but this includes simple venereal ulcers, now returned elsewhere, and if these were added the ratio for the present year would be 28·5 per 1,000, and consequently an increase on the rate in 1885; both these ratios are, however, a good deal below the average rate of the previous five years. *Secondary syphilis* also caused 28 admissions, or 22·8 per 1,000, a decline of 3·9 from the rate in the previous year, though above the average rate by 5·6. *Gonorrhoea* shows 47 admissions, or 38·3 per 1,000, which is considerably higher than the corresponding rate in the previous year and above the average rate by 13·5 per 1,000. Including all forms of venereal disease the ratio of admission was 89·6 per 1,000, as compared with 67·2 in the previous year, and with 82·3, the average rate. The ratio of constant inefficiency from these diseases was 8·26 per 1,000, being higher by 4·16 than that in 1885, and than the average rate by 2·70.

In the succeeding group of diseases 6 admissions are shown under the head of *alcoholism*, of these two were cases of delirium tremens, one of which was

Bermuda.

fatal. The ratio of admissions resulting from the abuse of alcohol was 4.9 per 1,000, being less than half of that in the preceding year, and also considerably below the average.

The admission rate for cases recorded as *debility* was 19.5 per 1,000, rather in excess of the last year's rate, and also above the average.

In the group of diseases not classified *rheumatism* shows 36 admissions, equal to 29.3 per 1,000, which is a higher ratio than that in the preceding year by 4.7, and above the average by 2.8 per 1,000. 5 of the admissions were cases of rheumatic fever, all of which recovered. *Tubercle* of the lung caused three admissions; one of the cases proved fatal.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 7 admissions, two for mental disease, one for paralysis, one for epilepsy, and the rest for neuralgia. There was also a death from apoplexy. *Diseases of the circulatory system* show 14 admissions, or 11.4 per 1,000, which is about the average rate. The cases comprised 6 of valve disease and one of hypertrophy of the heart; also 5 of palpitation, one of pericarditis, and one of aneurysm. There was one death from valve disease. Under the head of *respiratory affections* are recorded 39 admissions and 3 deaths; the admission ratio differs but little from the average rates of previous years. Of the cases 22 were bronchial affections, 8 pneumonia, two fatal; 5 pleurisy, one fatal; 2 laryngitis, and 2 pneumonic phthisis. The admissions for *diseases of the digestive system* were 174 in number, being in the ratio of 141.8 per 1,000, which is a good deal in excess of that in the previous year as well as above the average. The principal causes of admissions were dyspepsia, diarrhoea, and affections of the mouth and throat; there were, among others, five cases of hepatitis and 4 of jaundice. Among the remaining orders of local diseases those which caused most admissions were diseases of the *lymphatic and glandular system*, the *generative system*, and *cutaneous system*, the ratios of admission being 28.5, 25.3, and 44.0 per 1,000 respectively.

Injuries were 135 in number; more frequent than in the previous year, the ratio per 1,000 having increased to 110.0 from 80.9, but it is somewhat below the average. Sprains, wounds, and contusions together account for 118 of the cases, among the remainder being five of fracture and one of concussion of the cord. Three deaths occurred, one from drowning, one from fracture of the spine, both of these resulting from accidents, and one from gunshot wound, homicidal, one soldier having shot another in the abdomen; death resulted from peritonitis, and the man who inflicted the injury was found guilty of manslaughter and sentenced to a year's imprisonment. Two operations resulting originally from injuries, were performed, one an amputation of the finger and the other an amputation of the thigh at lower third, with successful result.

Invaliding.—The number of men invalided was 21; of these one was discharged locally and 20 sent home. The ratio of invaliding home was therefore 16.29 per 1,000, being lower than in the previous year by 7.54 and than the average ratio for 10 years by 1.31. With regard to the influence of age and service on invaliding, it is observed the ratio was highest between 25 and 30 years of age, and that it increased with length of service. The principal causes of invaliding were debility, rheumatism, mental affections, and diseases of the respiratory and circulatory system. The number of invalids finally discharged the service being also 20, the ratio per 1,000 was 16.29; this is higher than that in the previous year by 10.52, and than the decennial average rate by 6.27. The chief disabilities necessitating discharge were diseases of the respiratory system and of the organs of locomotion, also rheumatism and tubercular affections.

Officers.—The average strength was 69, and the number of attacks of illness 17. The ratio of prevalence of sickness was therefore 244.4 per 1,000, somewhat below that in the previous year. Among the cases treated were four of fever, one being enteric fever; no death occurred.

Women.—In an average strength of 91 there were 46 attacks of illness, equal to a ratio of 505.5 per 1,000, which is increased as compared with the return for the foregoing year. There were three cases of enteric fever treated, of which two recovered and the third was under treatment at the end of the year. The remaining cases included diseases of the generative system, debility, and respiratory affections six respectively.

Children.—The average strength was 163. The number of attacks of illness was 60, and there were 8 deaths, being in the ratios of 368·1 and 49·1 per 1,000 respectively, both of which are somewhat higher than in the preceding year. Among the cases were 2 of diphtheria, 8 of bronchial affections, and 16 of diarrhœa. The causes of death were spina bifida 2 cases, bronchitis 2 cases, and tubercle, teething, diarrhœa, and debility, one case respectively. *Bermuda.*

Sanitary Conditions.—The Principal Medical Officer states that the general sanitary condition of the various quarters occupied by the troops was uniformly reported as satisfactory by medical officers and special sanitary committees, and that these reports are in accordance with his own observation and experience.

With regard to the occurrence of enteric fever and its prevalence among the civilian inhabitants, he states that “some radical measures are urgently called for in the direction of a systematic and persistent supervision of the residences of the civil population. At present it would seem that cesspits are seldom, if ever, emptied, tanks hardly ever cleaned out, and the due protection of tanks from overflow or percolation from cesspits indifferently looked to.

“On the occasion of the arrival of the 2nd West Riding Regiment in relief, and pending the departure of the 2nd York and Lancaster Regiment, it was necessary to occupy a spare hut temporarily in extension of hospital accommodation at Prospect.

“The tanks throughout the command have been invariably cleaned when empty, and the water from those not emptied has been tested.

“The Royal Engineer canteen at Prospect has started a machine for the manufacture of aerated drinks; this will lessen the chance of enteric fever arising from the use of the beverages heretofore supplied from factories in the town of Hamilton, whose water supply is not above suspicion.

“Attention has been directed to the milk supply, and frequent inspections have been made of dairies belonging to contractors.”

VI.—ON THE HEALTH OF THE TROOPS SERVING IN THE WEST INDIES.

Sickness and Mortality.

I.—WHITE TROOPS.

West Indies Command.

The average strength of the troops serving in the Command during the year was 1,020. The force consisted of the 6th battery, 1st Brigade, London Division, and 3rd battery, 1st Brigade, Welsh Division, Royal Artillery; the 1st Battalion North Staffordshire Regiment, until December, when it was relieved by the 1st Battalion East Yorkshire Regiment, detachments Royal Engineers and Departmental Corps, and Garrison Staff.

The sickness and mortality among these troops during the year is shown in the following table:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,020	1,192	15	—	15	14	12	56·19	1168·6	14·70	13·73	11·76	55·09

Comparing these ratios with the corresponding ratios in the previous year an increase is observed of 246·4 per 1,000 in the rate of admission, one of 6·93 in that of death, and one of 12·01 in that of constantly sick. In comparison with average ratios for the preceding 10 years the admission rate has increased by 275·1, and the rate of constant inefficiency through sickness by 10·41 per 1,000, but the mortality rate shows a fractional decrease.

The average sick time to each soldier was 20·11 days, and the average duration of each case of sickness 17·21 days, being longer than the corresponding periods in the preceding year by 4·39 and ·16 days respectively, while as compared with decennial average periods the former is longer by 3·80 and the latter shorter by 1·04 days.

The more important statistics of the different corps are given in Abstract XLII. :—

The European troops were principally at Barbados, Jamaica, and Trinidad, there being only a few men in Honduras, Demerara, and the Bahamas. The highest ratio of admission was in the 3rd battery, Welsh Division, Royal Artillery, 1455·4 per 1,000, being followed by the 1st Battalion North Staffordshire Regiment, in which the annual ratio was 1246·5. Seven deaths occurred in the last-mentioned regiment, three in the battery above alluded to, two in the battery of the London Division, Royal Artillery, one in the Royal Engineers, one in the Ordnance Store Corps, and one in a West India Regiment. The 1st North Staffordshire Regiment shows the highest ratio of constant inefficiency through sickness, 61·36 per 1,000; the constantly sick rates in the other corps were not great. The East Yorkshire Regiment was too short a time in the Command for its statistics to be of any value. With regard to the influence of age on sickness and mortality, it appears from calculations made that it did not cause much difference in the admission of

men up to 25 years of age, those up to 20 years of age having a ratio of 1264·7, and those over 20 years one of 1285·0 per 1,000; over 25 years a more marked decrease was observed. The mortality rate, however, is greater between 25 and 30 years of age. As to the effect of length of service in the Command on sickness and mortality, it appears that the highest ratio of admission was in men between 1 and 2 years' service, 1312·6 per 1,000, in the first and third years of service the ratios were about the same, 1,072 and 1,076 per 1,000. The ratio of mortality was highest in the third year of service in the Command, 23·57 per 1,000; next under one year's service, 16·35; and then in the second year's service, 10·71.

The admissions and deaths in the different classes and orders of diseases are shown in Abstract No. VII.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—The cases in the first sub-group of these diseases comprised one attack of *enteric fever*, with fatal result; this case occurred at Barbados, and its origin could not be discovered. The admissions for simple *continued fever* were 234 in number, equal to 229·4 per 1,000, which is considerably higher than the corresponding rate in the previous year and also above the average rate. 149 of the cases occurred at Barbados, 48 and 1 death at Jamaica, and 37 at Trinidad. *Eruptive fevers* show only 3 admissions, and those for cow-pox. An epidemic of small-pox took place in Jamaica among the civil population, but re-vaccination was most carefully attended to, and there was not a single case among the troops. *Yellow fever* caused two admissions and two deaths in Jamaica. The Senior Medical Officer remarks that "the epidemic of yellow fever which "prevailed on board H.M.S. 'Urgent,' until late in December 1885, subsided, "and February passed without the occurrence of a case either in town or on "board ship, and it seemed as if the disease had disappeared when it showed "itself in the garrison in the person of an artilleryman, and the case terminated fatally. The white troops were then moved to the camp at Papine, "and the disease did not spread." There were 16 admissions and 2 deaths from *dysentery*, the admission ratio being 15·7 per 1,000; all the cases occurred in Jamaica.

Malarial fevers were the cause of 41 admissions and three deaths, the ratio of admission was 40·3 per 1,000, which is in excess of that in the previous year, and above the average rate for the last four years, though lower than that of some preceding that period. Of the cases 22 were ague and the remainder remittent fever; all the deaths occurred from the latter disease. Most of the cases took place in Jamaica.

Under the sub-group of venereal diseases it is observed that there were 51 admissions for *primary syphilis*, equal to a ratio of 50·0 per 1,000, which appears lower than the corresponding rate in the previous year by 15·6, but if the cases of simple venereal ulcer, which, according to the new method of registration, are returned elsewhere, were added, the ratio would be raised to 89·2 per 1,000. This would not only be an increase on the last year's rate, but would be above the average rate of the preceding 5 years. *Secondary syphilis* caused 25 admissions, or 24·5 per 1,000, less than half the rate in the preceding year, and also below the average rate. The admissions for gonorrhœa were 125 in number, or 122·5 per 1,000, being above the corresponding rate in 1885, and also above the average. The rate of admission for all forms of venereal disease was 236·2 per 1,000 as compared with 226·7 the previous year, and with 187·5, the average of the preceding quinquennium. The ratio of constant inefficiency on account of these affections was 16·93 per 1,000, that in 1885 having been 14·44, and the average being 12·29.

In the succeeding group of diseases the causes of admission were *tænia solium* 1 case and *alcoholism* 12, of which one was *delirium tremens*.

Rheumatism caused 26 admissions, or 25·5 per 1,000, being rather more prevalent than usual. Only two cases are returned as rheumatic fever. There was only one admission for tubercular disease of the lungs.

LOCAL DISEASES.—Diseases of the Nervous System caused 14 admissions and 1 death, being in the ratios of 13·7 and ·98 per 1,000. The rate of prevalence has declined from the previous year, and is below the average. Most of the cases were neuralgia in some form, and there was one fatal case of meningitis. The admissions for *diseases of the circulatory system* only

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numbered 13, being below the average in frequency. Among the cases treated were 3 of valvular disease of the heart and one of aortic aneurysm. *Diseases of the respiratory system* caused 43 admissions and 2 deaths, the admission ratio, 42·2 per 1,000, being just double that in the preceding year, and above the average. The principal causes of admission were bronchial affections, three fourths of the total number; there were 3 admissions for pneumonia, one of which was fatal, and also a fatal case of acute pneumonic phthisis. The admission rate for *diseases of the digestive system* was 99·0 per 1,000, being lower than that in the previous year by 13·2, and below the average rate; the decrease, however, is due to the admissions for dysentery being returned under another heading. Out of 101 admissions 87 were for dyspepsia, diarrhoea, and affections of the mouth and throat. Of the remaining orders of local diseases those which caused most admissions were *diseases of the lymphatic and glandular system*, 62·7 per 1,000; *diseases of the generative system*, 64·7; and *cutaneous affections*, 87·2, but none of them require special comment. One admission is shown under the head of *poisons*, a man having accidentally taken a quantity of oxalic acid in mistake for Epsom salts, but he recovered after a few days' treatment.

Injuries caused 153 admissions, being more frequent than usual and than in the previous year. The admissions were principally on account of contusions, wounds, or sprains. There were two deaths, one from fracture of the spine caused by a fall from the upper floor of a barrack, and the other was from rupture of the liver caused on board a troopship by a man falling from his hammock on to another man on the deck below.

Invaliding.—The number of men invalided home was 14, equal to 13·73 per 1,000, which is a lower ratio than that in the previous year by 5·15, and is below the decennial average by 12·80. The principal causes of invaliding were debility 4 cases, epilepsy 2, valve disease of the heart 2, and aneurysm of the aorta 1 case. The number of men finally discharged by invaliding was 12, or 11·76 per 1,000, which is higher than the ratio in 1885 by 5·10, but lower than the average of the preceding 10 years by 2·19. The chief disabilities causing discharge were diseases of the nervous and circulatory systems.

With regard to the effect of age on invaliding the ratio for men between 25 and 30 years was higher than among men younger; and as to the influence of length of service it appears that the ratio of invaliding increases with residence.

Officers.—The average strength was 117, and the number of attacks of illness 109; there was one death, and four officers were invalided. The ratios to strength were therefore 931·6, 8·55, and 34·20 per 1,000. The ratios of sickness and invaliding show an increase as compared with the previous year, but that of mortality a decrease. The principal causes of sickness were fevers and disorders of the digestive system; of the former there were 19 cases of simple continued fever, 13 of remittent fever, and 5 of ague; and of the latter, 8 of diarrhoea and 6 of dyspepsia. Injuries of a local character also caused some sickness. The death, which occurred at Belize, was due to remittent fever. The causes of invaliding were rheumatism 3 cases, and stricture of the urethra 1 case.

Women.—In an average strength of 84 there were 23 attacks of illness, the sick rate being 273·8 per 1,000, a decline from the previous year; there was no death. The chief causes of sickness were simple continued fever, debility, and uterine affections.

Children.—The average strength was 169, the attacks of illness numbered 29, and the deaths 5, giving ratios of 171·6 and 29·58 per 1,000 respectively, which have both declined from the corresponding ratios in the preceding year. Among the cases treated were 2 of simple continued fever, 2 of dysentery, 2 of debility, and 4 of bronchitis. The causes of death were convulsions, 2 cases, and whooping cough, scrofula, and diarrhoea, one case respectively.

Sanitary Conditions.—The Senior Medical Officer reports that the general health of the troops in the command was satisfactory throughout the year. The sanitary condition of the barracks and hospitals at the several stations was good, the accommodation was sufficient, there was no over-crowding, and the ventilation was satisfactory. The drainage and conservancy were well attended to, and the water supply was good and sufficient. The rations were

good, and the means of cooking satisfactory. The duties of the troops were of the usual character, and were not prejudicial to health. Means of recreation, both for in-door and out-door amusements, were provided for the men. *West Indies Command.*

The following sanitary improvements to existing buildings were carried out during the year:—At Barbados improvement in the earth-closets at the Iron barracks, and the provision at these barracks, as well as at the ordnance barracks, of separate rooms for sergeants. At Demerara additional storage for water was provided to the officers' quarters, and latrines constructed at Eve Leary Barracks.

II.—BLACK TROOPS.

The average strength of non-commissioned officers and men was 1,120, exclusive of white sergeants. The black troops serving in the command consisted of the headquarters 1st West India Regiment at Jamaica, which left for Sierra Leone in March, being relieved by the headquarters 2nd West India Regiment, and the detachments at Barbados, Demerara, Honduras, and Nassau were furnished from these regiments; at Barbados also there was the corps of military labourers.

The statistics of sickness and mortality among these troops are shown in the following table:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids Sent Home.	Invalids Finally Discharged.	Average Constantly Sick.
1,120	1,448	22	—	22	—	18	64·13	1292·8	19·64	—	16·07	57·25

Comparing these results with the corresponding ratios in the preceding year, a considerable increase is observed in the ratio of admission, equal to 309·7 per 1,000; in the death rate there is an increase of 4·47, but in the constantly sick rate there is a slight decline, 2·96. In comparison with corresponding average rates for the preceding 10 years, the admission and mortality rates have increased, by 218·7 and 4·26 respectively, and the rate of constant inefficiency decreased by 1·13 per 1,000.

The average sick time to each soldier was 20·90 days, and the average duration of each case of sickness 16·16 days, being shorter than the corresponding periods in the previous year by 1·07 and 6·19 days, but longer than the decennial average periods by 7·23 and 3·44 days respectively.

The ratio of admission in the 2nd West India Regiment was 1593·2 per 1,000, considerably higher than that in the 1st West India Regiment. Of the deaths, 17 occurred in the former and 4 in the latter; there was also one death in the corps of military labourers.

The admissions, deaths, and invaliding in the different classes and groups of diseases are shown in Abstract VIII.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In the first sub-group of these diseases *eruptive fevers* show 4 admissions, of which one was a case of small-pox which occurred at Jamaica, where the disease was epidemic among the civil population. There was no admission for enteric fever, but *simple continued fever* caused 193 admissions, equal to a ratio of 172·3 per 1,000, which is a considerable increase on the average rate and more than twice that in the preceding year. The majority of the cases occurred at Jamaica. 35 admissions for dysentery are recorded, equal to 31·2 per 1,000,

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and there were 2 deaths. 29 of the cases and 1 death occurred in Jamaica, 4 and 1 death at Nassau, and 2 cases in Demerara. Under the head of *other diseases* of this sub-group are shown 49 admissions, the whole of which were caused by mumps, 48 cases occurring in Jamaica and one at Honduras.

Malarial Fevers also caused a high admission ratio, 146·4 per 1,000 as compared with 56·5 in the previous year, and it is also above the average ratio to some extent. Of 164 admissions 83, or just over half, were cases of ague, and the remainder remittent fever. Ague occurred principally in Jamaica, 77 cases being recorded, whilst remittent fever was principally at Honduras, where 65 cases happened; 8 deaths occurred from remittent fever.

Among venereal affections *primary syphilis* caused 104 admissions, or 92·9 per 1,000; if to these, 37 admissions, or 33·0 per 1,000, for simple venereal ulcer, be added, the rate will be comparable with that in the preceding year, and will be found to have declined by 41·1 and to be rather below the average rate for the preceding five years. The admissions for secondary syphilis were 25, or 22·3 per 1,000, which does not differ much from the average rate. *Gonorrhœa* caused 148 admissions, equal to 132·1 per 1,000, as compared with 159·4 in the preceding year, and it is also rather below the average rate. Including all forms of venereal disease, the ratio of admission was 280·3 per 1,000, and the ratio of constant inefficiency on account of these diseases 18·81 per 1,000, which compare favorably with corresponding average ratios as well as with those in the preceding year.

In the group of diseases not classified, *rheumatism* shows 96 admissions, or 85·7 per 1,000, which is considerably above the average rate as well as above the rate in the previous year. It is said that the increased prevalence of rheumatic affections was due to the unusually heavy rainfall. Among the cases treated were 8 of rheumatic fever, all of which recovered. *Tubercular disease* of the lung caused 5 admissions and 3 deaths, and one death is returned from *scrofula*.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 25 admissions, being at the rate of 22·3 per 1,000, which is above the average. Most of the admissions were due to neuralgia, and among the remainder were two cases of paralysis, one fatal; a case of dementia; and one of meningitis, which ended fatally.

Diseases of the Circulatory System caused only 6 admissions, of which three were for cases of valvular disease of the heart and three for palpitation. Two deaths occurred from valve disease. *Respiratory affections* caused 83 admissions and 2 deaths, the ratio of prevalence being 74·1 per 1,000, which is above the usual rate. The majority of the cases were bronchial affections, but there were also 7 of pneumonia and 4 of pleurisy. The deaths were caused by bronchitis and acute pneumonic phthisis, one case each. The ratio of admission for *diseases of the digestive system* was 100·9 per 1,000. Comparison of this ratio with that in the preceding year and the average ratio shows that these affections were much more prevalent than usual, particularly when it is remembered that the admissions for dysentery are no longer included. The cases were mostly affections of the mouth and throat, diarrhœa, and dyspepsia, and no death occurred. Of the remaining orders of local diseases, those causing most sickness were diseases of the generative system, those of the connective tissue, and cutaneous disorders; the last named were considerably more frequent than in the preceding year, and were above the average.

Injuries were less frequent than in the preceding year, and no death resulted from them. The number of admissions was 103, or 92·0 per 1,000, and the majority were due to contusions, wounds, sprains, or blisters of the feet, the remainder comprising 2 cases of dislocation and one of fracture.

Invaliding.—18 men were discharged the service by invaliding, the ratio per 1,000 of strength being 16·07 as compared with 22·76 in the previous year and with a decennial average rate of 26·79. The principal disabilities necessitating discharge were diseases of the nervous and circulatory systems, ophthalmic affections, and debility.

Women and Children.—The average strength of women was 64, and of children 67. Among the former there were 14 attacks of illness, chiefly bronchial affections or simple continued fever and debility; and among the latter there were 5 attacks of illness and one death, which was due to diarrhœa.

Sanitary Conditions.—The Senior Medical Officer reports that the health of the black troops was generally good throughout the command. There was no change in the barracks occupied by them, and the accommodation was sufficient. The ventilation of the barracks, the drainage and conservancy, as well as the ablution arrangements, are reported to be satisfactory. The water supply is good and sufficient, and the rations and means of cooking them satisfactory. The clothing of the men is good and suitable to the climate. The duties of the men were of an ordinary character, and were not prejudicial to health. Recreations and amusements were provided for the men. At Jamaica, at Up Park Camp, improvements have been effected in the latrine arrangements, and their ventilation much improved. *West Indies Command.*

VII.—ON THE HEALTH OF THE TROOPS SERVING IN WESTERN AFRICA.

Sickness and Mortality.

I.—WHITE TROOPS.

West Africa.

The white troops consisted of the European non-commissioned officers of the West India Regiments and of the officers serving in the Command. The average strength of the former was 13; there were 22 admissions into hospital, one death, and one man invalided. The admission ratio was 1692·3 per 1,000, somewhat lower than that in the previous year. Of the admissions 7 were due to remittent fever, one case being fatal; there were also 5 cases of ague, 5 of debility, 2 of simple continued fever, and 1 of anæmia, splenitis, and alcoholism respectively. The case invalided was one of debility.

The average strength of officers was 30; there were 57 admissions, no deaths, and 8 officers were invalided. The rate of prevalence of sickness, 1900·0 per 1,000, differs only by a very slight increase from that in the preceding year. Two thirds of the attacks of illness were fevers, chiefly malarial, 24 cases being shown as remittent fever and 15 as ague. Other diseases showed no particular prevalence. The invaliding was also due chiefly to malarial fever. 6 cases, also 2 for debility.

II.—BLACK TROOPS.

The average strength was 503, of which 340 were at Sierra Leone and 163 at Cape Coast Castle. At Sierra Leone the headquarters of the 2nd West India Regiment was replaced in April by the headquarters of the 1st West India Regiment, and at Cape Coast Castle there was a detachment of the latter corps throughout the year.

In the subjoined table are shown the principal health statistics of these troops during the year :—

1899. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent to West Indies.	Finally Discharged.		Admission.	Deaths.	Invalids sent to West Indies.	Invalids finally Discharged.	Constantly Sick.
503	1,503	10	—	10	—	—	49·54	2988·0	19·88	—	—	98·49

Compared with corresponding ratios in the preceding year, as well as with those of the average of the previous 10 years, it will be observed that the ratio of admission is more than doubled in the former comparison and nearly so in the latter; the mortality rate is also increased though not to an equal extent; and the ratio of constant inefficiency is also greater by about one third.

The average sick time to each soldier was 35·95 days, and the average duration of each case of sickness 12·03 days, the former being longer than in the pre-

ceding year and than the decennial average by 10·76 days and 12·59 days, and *West Africa*. the latter shorter by 7·20 days and 3·56 days respectively.

The proportions in which the two stations contributed to the sickness and mortality in the Command are shown in the following table :—

1886. Stations.	Average Strength.	Admissions.	Deaths.	Average Sick. daily	Ratio per 1,000.			Sick Time to each Soldier.	Average duration of each case of Sickness.
					Admissions.	Deaths.	Constantly Sick.		
Sierra Leone - -	340	1,067	6	35·42	3138·2	17·65	104·17	38·02	12·12
Cape Coast Castle -	163	436	4	14·12	2674·8	24·54	86·62	31·62	11·82

With regard to these high ratios it will be presently shown that the principal causes of sickness were malarial fevers; these prevailed extensively in both stations. The Senior Medical Officer remarks that "troops recently arrived from the West Indies are particularly susceptible to climatic influences on the West Coast."

The admissions and deaths in the different groups and orders of diseases are shown in Abstract IX.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In the first sub-group of these diseases are returned 35 cases of simple *continued fever*, equal to 69·6 per 1,000; all of these occurred at Sierra Leone. In the preceding year no such cases occurred. *Dysentery* caused 19 admissions, 16 being at Cape Coast Castle, but no death occurred. The remaining 31 admissions in this sub-group were all cases of mumps, which was prevalent at both stations, having originated on board ship among the troops proceeding to the Command.

Malarial Fevers.—The admission for these fevers numbered 788, and there were 6 deaths, being in the ratios of 1566·6 and 11·93 per 1,000 respectively. The ratio of prevalence is very greatly above the average as well as above that in the preceding year. This increase is attributable partly, it is said, to the unhealthy season, and partly to the effect of climate on the newly arrived troops. The prevalence of these fevers did not differ greatly in the two stations of the Command, the ratio at Sierra Leone being 1638·3, and that at Cape Coast Castle 1417·2 per 1,000. Of the total number of admissions 451 were cases of remittent fever and the remainder ague. 337 cases of remittent fever occurred at Sierra Leone and 114 at Cape Coast Castle. At each station there were 3 deaths from malarial fever.

In the sub-group of venereal diseases 50 admissions are shown for *primary syphilis*, equal to a ratio of 99·4 per 1,000 as compared with 97·2 in the preceding year, which shows a slight increase; but if the admission ratio for simple venereal ulcers, now returned elsewhere, be added, the increase would be greater by 28·0, and the total ratio would then be above the average. *Secondary syphilis* caused only 3 admissions, or 6·0 per 1,000, below the average rate. The admissions for gonorrhœa were 122 in number, equal to a ratio of 242·5 per 1,000, which is just double the corresponding rate in the preceding year, and is also above the average. Including all forms of venereal disease the ratio of admission was 373·7 per 1,000, and that of constant inefficiency 23·58, being considerably in excess of the corresponding ratios in the previous year and of the average ratios for the preceding five years.

Among the remaining admissions for general diseases were 26 for *rheumatism*, one of which was a case of rheumatic fever. The ratio of prevalence, 51·7, has declined to some extent. There were also two cases of *tubercular disease* of the lungs and two of *anæmia*.

LOCAL DISEASES.—Among these *nervous affections* caused 6 admissions or 11·9 per 1,000 below the average; the cases comprised one of paralysis, one of apoplexy, and the remainder neuralgia. Of 21 admissions for *diseases of the circulatory system* 20 were cases of palpitation and one of hypertrophy of

West Africa.

the heart. The ratio, 41·7, shows some increase in prevalence. There were 48 admissions for *respiratory diseases*, of which 41 were bronchial affections; two deaths occurred, both from pneumonia. The rate of admission, 95·4 per 1,000, is higher than that in the previous year by 17·2, and is above the average rate. The ratio of prevalence of *diseases of the digestive system*, 99·4 per 1,000, on the other hand, has apparently declined by 23·8 as compared with the preceding year; this decrease, however, is not real and depends on the registration of dysentery in another place, and were the latter added it would bring up the ratio to about the average and above the previous year's rate. The admissions were chiefly due to diarrhoea, dyspepsia, and affections of the throat. Among the remaining orders of local diseases those causing the highest admission ratios were *diseases of the lymphatic system* 85·5, of the *generative system* 99·4, and *cutaneous affections* 145·1 per 1,000; the last-named were more prevalent than usual but less so than in the previous year.

Injuries.—The admissions numbered 73, or 145·1 per 1,000; these cases were generally contusions, wounds, or sprains, but there were 3 cases of fracture and one death from fracture of the skull.

Women.—The average strength was 33, and there were 59 attacks of illness. The ratio of prevalence of sickness, 1787·9 per 1,000 was more than double that in the preceding year, but there was no death. Malarial fevers were the principal causes of sickness, 23 cases of ague and 16 of remittent fever being returned.

Children.—The average strength of children was also 33, but there were only 28 admissions, equal to a ratio of 848·5 per 1,000, which, however, is greater than the corresponding rate in the preceding year by 324·7. Among the cases treated were 6 of remittent fever with one death, 4 of ague, 4 of simple continued fever, 3 of debility, 2 of bronchitis, and single cases of various diseases.

Sanitary Conditions.—The Senior Medical Officer, Surgeon-Major P. Connolly, remarks that “during the first three months of the year Sierra Leone was garrisoned by the headquarters and a detachment of the 2nd West India Regiment and also a detachment of the 1st West India Regiment. The season being healthy and the barracks not overcrowded there was not much sickness. In April the headquarters 1st West India Regiment relieved the 2nd West India Regiment, after which the garrison contained over 400 men and consequently there was slight overcrowding. The men of the 1st West India Regiment furnished a large sick list, and as the season advanced the station hospital was found to be not nearly large enough to accommodate the sick, and though there was no equipment for the infection ward, patients had to be placed there to sleep: two barrack rooms were also used for milder cases.”

The Senior Medical Officer at Cape Coast Castle reports that the sanitary condition of Cape Coast is far from satisfactory, but that it is being slowly improved. About 12 new latrines were built during the year and as many over to be built in the following year.

At Kortright Hill, Sierra Leone, the following buildings were completed:—Hut barracks for 72 men (2 huts), with ablution room, cook-house, and latrines. Quarters for three non-commissioned officers with kitchen, latrine, and dry earth sheds.

The barracks at Tower Hill were re-floored, and the weather boarding renewed and painted.

The ventilation and lighting of the barracks are on the whole satisfactory. The water supply is of very good quality and sufficient in quantity; the drainage was in good order and the latrine arrangements, dry earth system, satisfactorily carried out; the rations were of good quality and the clothing suitable to the climate and season.

The Senior Medical Officer closes his report by saying that “it is not an easy task to trace the causes of disease on the West Coast, and the theories have been legion, but as the sanitary conditions improve and the amount of barrack accommodation is increased, we may hope for a marked diminution in the number of admissions to hospital.”

VIII.—ON THE HEALTH OF THE TROOPS SERVING AT THE CAPE OF GOOD HOPE AND AT ST. HELENA.

Sickness and Mortality.

The average strength of the warrant officers, non-commissioned officers, and men serving in the Command during the year was 3,971, and of these 213 were stationed at St. Helena. The following corps composed the force:—The 6th (Inniskilling) Dragoons, four batteries Royal Artillery, the 1st Battalion Royal Scots, the 2nd Battalion South Lancashire Regiment, the 1st Royal Inniskilling Fusiliers, the 1st Battalion Welsh Regiment, detachments Royal Engineers and Departmental Corps, and Garrison Staff. All these were in the Command throughout the year with the exception of the last-named infantry regiment, which left for Egypt in May.

The following table shows the principal health statistics of the troops in the Command:—

Cape of Good Hope and St. Helena.

1886.	Average Strength.	Admissions.	Deaths.	Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
				Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
Cape of Good Hope -	3,758	3,107	15	71	51	190·32	826·8	3·99	18·89	13·57	50·64
St. Helena -	213	104	2	2	—	4·63	488·3	9·39	9·39	—	21·74
Total -	3,971	3,211	17	73	51	194·95	808·6	4·28	18·38	12·84	49·00

Comparing these ratios of sickness and mortality in the Command with the corresponding ratios in the preceding year, and with the similar average ratios for the preceding 10 years it is observed that a decrease has occurred in all of them, amounting in the case of admission rate to 72·8 per 1,000 in the former comparison and 20·3 in the latter; as regards the ratio constantly sick the decline was 3·05 and 1·78 per 1,000 respectively, and as regards mortality the rate is less than half that in the previous year and considerably below the decennial average.

The average sick time to each soldier was 17·91 days, and the average duration of each case of sickness 22·16 days, being shorter than the corresponding periods in the preceding year by 1·12 days and ·57 days respectively, also fractionally shorter than the decennial average periods.

With regard to sickness and mortality in the island of St. Helena alone, it is observed that the ratio of admission has increased by 159·7 per 1,000 as compared with that in the preceding year; mortality has slightly increased, but the ratio constantly sick has scarcely changed.

The sickness and mortality in particular corps during the year is shown in Abstract XLII.

The ratio of admission in the cavalry regiment, the 6th Dragoons, was 518·0, the death rate 6·34, and the constantly sick rate 29·73 per 1,000. Of the batteries of Artillery, No. 1 Battery, 1st Brigade South Irish Division, quartered at Cape Town, shows the highest admission ratio, 916·2 per 1,000,

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and No. 7 Battery, Western Division stationed at St. Helena, the lowest 383·2. There were two deaths in the last-named battery, and one in No. 8 Battery, 1st Brigade Western Division, at Cape Town. The two batteries quartered at Cape Town had the highest ratio of constantly sick and that at St. Helena the lowest. In the infantry the highest admission and constantly sick rates, 996·3 and 69·04 per 1,000, were in the 1st Battalion Royal Scots, headquarters at Cape Town, and the lowest 647·5 and 29·13 were in the 1st Royal Inniskilling Fusiliers in Natal. Of 10 deaths in this arm of the service three took place in each of the above-mentioned regiments, and four in the 2nd Battalion South Lancashire Regiment.

With regard to the influence of age and of length of service in the Command on sickness and mortality, it has been calculated that the ratio of admission among men under 20 years of age was 835·1 per 1,000, among men between 20 and 25 years 983·6, among men between 25 and 30 years 563·7, among men between 30 and 35 years 439·5, and lower still for men beyond that age. The death rate was *nil* in the first period, 5·28 per 1,000 in the second period 20 to 25 years of age, 2·64 between 25 and 30 years of age, and 2·95 between 30 and 35 years of age. In the first year of service in the country the admission ratio was 380·4 per 1,000, in the second year it rose to 1228·9, fell in the third year to 513·6, and in the fourth year to 357·1, rising again in the fifth year to 532·7, and still further for the next five years taken together. The death rate increased with length of service in the Command, being in the first year 1·32 per 1,000, in the second 3·29, in the third 4·87 in the fifth 16·48, and from the fifth to the tenth year 18·69 per 1,000.

The admissions, deaths, &c. in the different groups and orders of diseases will be found in Abstract No. X.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In the first sub-group of these diseases *eruptive fevers* were represented by a single case of measles, which occurred at Cape Town. *Enteric fever* caused 14 admissions and 6 deaths, equal to ratios of 3·5 and 1·51 per 1,000 of strength, which compare very favorably with those in the previous year, 7·4 and 2·29, and with those of the average of the preceding five years, 24·3 and 4·36 respectively. The per-centage of mortality to attacks was 43 as compared with 31 in the preceding year. This high rate cannot probably be altogether depended on, as it is believed that some of the milder cases of this disease may have been returned as simple continued fever. Of the cases 7 with 5 deaths occurred in Pietermaritzburg, the attacks did not occur at any particular period, but were spread over the year, and it is stated that no definite cause for their occurrence could be traced. Two cases occurred at Durban, one of which proved fatal, and there were two cases at Etshowe, which recovered. The three remaining cases occurred in Cape Town, and were probably contracted in the lower parts of the town, the sanitary condition of which is very bad. *Simple continued fever* caused 165 admissions, or 41·6 per 1,000, lower than the corresponding rate in the preceding year by 4·3, and considerably below the average rate. The remaining admissions in this sub-group were 17 attacks of dysentery, all of which recovered; 6 occurred at Etshowe, 7 at Pietermaritzburg, 1 at Pinetown, and 3 at Simon's Town.

Malarial Fevers.—34 cases, including 32 of ague and 2 of remittent fever, are recorded, being in the ratio of 8·6 per 1,000, which is considerably lower than the corresponding ratio in the preceding year and than the average rate. The Principal Medical Officer, Deputy-Surgeon General J. G. Faught, states that ague is seldom met with in this command except among troops who have lately arrived from Mauritius, or some other stations where this disease prevails.

In the sub-group of venereal diseases it is observed that 478 admissions for *primary syphilis* are recorded, the ratio of admission being 120·3 per 1,000; if to these be added 116 admissions for simple venereal ulcer, now recorded under diseases of the generative system according to the new system of registration, the ratio will be raised to 149·5 per 1,000, which is almost identical with the corresponding ratio in the preceding year, but is considerably above the average rate. The admissions for *secondary syphilis* numbered 195, the same as in the previous year, and the ratio of admissions 49·1 per 1,000 differs only fractionally, but the rates of both years are much above the average rates in former years. One death resulted from constitutional

syphilis. *Gonorrhœa* caused 422 admissions, or 106·3 per 1,000 as compared with 114·2 in the previous year, both of these being above average rates. Including all forms of venereal disease, the ratio of admission was 304·9 as compared with 313·0 in the previous year, and with 153·2, the average rate of the preceding five years. The ratio of constant inefficiency on account of these diseases was 21·79 per 1,000, being fractionally lower than in the preceding year, but above the average rate by 9·25. With regard to the amount of inefficiency from this cause the Principal Medical Officer remarks that strong representations have been made as to the advisability of the Contagious Diseases Act which exists being enforced in the Colony.

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The number of admissions for *alcoholism* was 19, and for *delirium tremens* one. The Principal Medical Officer remarks that "this is not a very large number when the quality and cheapness of liquor are considered"; but there is no doubt that the admissions for many other diseases were materially increased through alcoholic excess.

In the Group D., diseases not classified, 108 admissions are shown for *rheumatism*, being in the ratio of 27·2 per 1,000, which is considerably below the average rate, as well as that of last year. Of the cases 10 were rheumatic fever, but no deaths occurred. *Tubercular disease* of the lung caused 8 admissions as compared with 14 in the preceding year. The Principal Medical Officer states that the climate of the interior is very favorable to cases of this nature, but the damp climate of the coast is quite the reverse, and the disease progresses with greater rapidity than at home. The remaining admissions in this group of diseases were due either to anæmia or non-malignant growths.

LOCAL DISEASES.—The admission ratio for *diseases of the nervous system* was 6·8 per 1,000, slightly below the rate in the previous year as well as below the average rate. Of 27 admissions 5 were cases of mental disease, and of the remainder the majority were neuralgic affections. One death is returned from softening of the brain. *Ophthalmic affections*, with an admission ratio of 20·4 per 1,000, were more prevalent than usual. Out of 81 admissions there were 50 cases of conjunctivitis and 24 of iritis. The admissions for *diseases of the circulatory system* were 36 in number, the ratio, 9·1 per 1,000, having declined from that in the previous year and being below the average. Most of the admissions were due to palpitation, but there were 5 cases of valve disease of the heart and one death from pericarditis. *Respiratory diseases* were less frequent than in the preceding year, the admission ratio being only half that then recorded and also below the average rate. Of 59 cases 41 were bronchial affections, 7 pneumonia, 1 pleurisy, and 6 pneumonic phthisis, 2 of which were fatal.

Diseases of the Digestive System caused 321 admissions and the death of one man from hepatitis, an invalid, after leaving the command. The admission ratio was 80·8 per 1,000, which compares favorably with that of the previous year, even were the admissions for dysentery, now recorded elsewhere, deducted from that ratio. The decline from the average ratio is still more marked. Affections of the mouth and throat, diarrhœa, and dyspepsia caused the bulk of the admissions, and there were 33 cases of hepatic disorder, including 17 of jaundice. Of the remaining orders of local diseases those causing most sickness were *diseases of the lymphatic system* 37·3 per 1,000, *diseases of the generative system* 46·3, and *cutaneous affections* 55·9. The first and last of these show an increase as compared with the results in the previous year, but the second does not admit of comparison, owing to the changes that have taken place in the nomenclature of diseases.

Injuries.—There were 5 admissions for general injury, all cases of sunstroke, and one death, a case of suicide by hanging occurred at St. Helena, a verdict of temporary insanity was recorded at the inquest, and no motive for the act was discovered, but it is said that the man had been drinking for some days. The admissions for local injury numbered 401, and there were 3 deaths. Seven-eighths of the admissions were for contusions, wounds, or sprains, and among the remainder were 18 cases of fracture and 7 of dislocation. The deaths were due to compression of the brain, fracture of the skull, and fracture of the ribs with injury of lung respectively, and all were the result of accident.

Invaliding.—73 men were invalided home during the year, and 51 were discharged as invalids, being in the ratios of 18·38 and 12·84 per 1,000 respectively

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Compared with the results in the preceding year the ratio of invaliding home has declined by 21·73, and final discharge by 8·73, and compared with decennial average ratios the former has decreased by 40·42 and the latter by 9·22. The principal causes of invaliding were debility 16 cases, heart disease 13, nervous diseases 11, including 4 of mental affections, rheumatism 6, ophthalmic affections 6, &c. The chief disabilities causing final discharge were diseases of the circulatory system 10 cases, ophthalmic affections 8, nervous diseases (including 5 mental) 9, and debility 5. With reference to the influence of age and length of service in the Command on invaliding, it is observed that among men 20 years of age the ratio was 37·23 per 1,000, from 20 to 25 years 18·48, from 25 to 30 years 15·83, from 30 to 35 years 23·60, an increase in further periods; the ratio of invaliding of men under 1 year's service was 27·74 per 1,000, between 1 and 2 years 23·00, between 2 and 3 years 10·72, between 3 and 4 years 5·49, after which there is again an increase.

Officers.—The average strength was 151, the attacks of illness numbered 67, and there was one death. The ratio of prevalence of sickness, 443·7 per 1,000, compares favorably with that in the preceding year. Among the attacks of illness were 6 of fevers, of which one was a fatal case of enteric fever at Pietermaritzburg. Injuries caused 27 illnesses, 9 being for fractures. Six officers were invalided, one for ague, rheumatism, debility, prostatitis, ulcer, and fracture respectively.

Women.—The average strength of women was 219; among these there were 58 cases of illness, exclusive of ordinary parturition, being in the ratio of 264·8 per 1,000, which compares very favorably with that in the previous year, being less than half. Among the cases treated were 2 of enteric fever, 1 of remittent fever, and one of simple cholera. Of the remainder the majority were cases of uterine disorders and debility. Two deaths occurred, one from pneumonia and the other from pneumonic phthisis.

Children.—In an average strength of 398 there were 69 attacks of illness, the ratio of prevalence being only 173·4 per 1,000 as compared with 255·4 in the preceding year. There were 9 deaths, equal to 22·61 per 1,000 as compared with 29·57. Among the cases treated were two of scarlet fever, two of enteric fever, 12 debility, 15 respiratory affections, and 13 digestive disorders. The deaths were due to dysentery, debility, bronchitis, convulsions, quinsy, peritonitis, abscess, accidental drowning, and premature birth, one case respectively.

Sanitary Conditions.—The Principal Medical Officer states that the sanitary condition of the barracks and camps throughout the Command has been fairly satisfactory throughout the year.

Pinetown and Durban were discontinued as stations for troops, also the camp at Helpmakaar, the troops being concentrated at Pietermaritzburg.

In Cape Colony, Wynberg has been selected for the concentration of troops, and the ground was being prepared for the erection of huts for the accommodation of some 1,500 men, but the huts were arriving slowly, still it was hoped they would be occupied during the succeeding year. It is stated by the Principal Medical Officer that, provided the water supply is as good as that of Cape Town, a better site could not have been chosen.

It was proposed to remove the castle at Cape Town and to build barracks on its site, and another suggestion is that it should be converted into the military prison. The barracks are gradually being evacuated, as in parts they are becoming dilapidated; it is expected that they will be sold as soon as the huts at Wynberg are ready for the accommodation of the troops.

At Pietermaritzburg the troops are huddled and they enjoyed good health. A block of barrack-huts was completed for officers, but the quarters do not appear to give entire satisfaction.

The water supply of the principal military stations, Cape Town and Pietermaritzburg, is of excellent quality, and is supplied by the public waterworks. In the camps in Zululand the water is obtained from rivers and springs, and when from the former source, particular attention has been paid to filtration, &c.

With a very few exceptions, such as the hospital at Cape Town and some officers' quarters in the castle, the dry earth system of conservancy prevails throughout the Command and gives satisfaction; it is hoped that this system will shortly be universal.

The Senior Medical Officer at St. Helena reports that the health of the garrison was generally such as to justify the character for salubrity which this station has long held, for although the amount of sickness was numerically greater than in the previous year, yet the increase was principally in diseases which are not influenced by climate. There was only small rainfall during the year, but there was no excessively high temperature, and the general climatic conditions were favorable. *Cape of Good Hope and St. Helena.*

The barracks were in a satisfactory condition, and there was no overcrowding, but with regard to ventilation, a suggestion for improvement was made. There was no complaint regarding drainage, and the conservancy arrangements were satisfactory.

Water supply, ablution arrangements, &c. are all of a satisfactory character.

IX.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF MAURITIUS.

Sickness and Mortality.

Mauritius.

The average strength of warrant officers, non-commissioned officers and men serving in the Command during the year was 414. The garrison was composed of a battery Royal Artillery, a detachment 1st Battalion Royal Inniskilling Fusiliers, and a small number of men belonging to the Royal Engineers, Garrison Staff, and Departments. No change took place during the year.

The subjoined table gives the principal health statistics of the troops :—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
414	597	9	—	9	16	6	31·38	1442·0	21·73	38·64	14·40	75·79

Compared with the results for the preceding year a considerable decrease, equal to 1066·4 per 1,000, has taken place in the admission ratio, and a slight decrease, 6·64, in the constantly sick rate; but in the death rate there is an increase of 4·97. In comparison with corresponding average ratios for the preceding 10 years a considerable decrease is also observed in the ratio of admissions, and a small one in that of constant inefficiency through sickness, 868·4 and 7·09 per 1,000 respectively, but in the mortality ratio there is an increase of 4·27.

The average sick time to each soldier was 27·66 days, and the average duration of each case of sickness 19·18 days, the former being shorter than the corresponding period in the previous year by 2·43 days, and than the decennial average period by 2·59 days, while the latter is longer in each of these comparisons by 7·19 and 6·09 days respectively.

The Senior Medical Officer, Brigade Surgeon W. Tanner, remarks with regard to the great reduction in the admission ratio among the troops, that "this great improvement can only be due to the transfer of the infantry detachment to Curepipe from the Line barracks, Port Louis, and shows the great desirability of the speedy removal of every soldier, who is not indispensable for military reasons at Port Louis, to Curepipe, a place 2,000 feet above sea level, with a temperature at least 10 or 15 degrees lower than that of Port Louis at the hottest period of the day, and free from malaria and other most insanitary conditions prevalent at the former place."

In Abstract XLII. are the chief statistics of sickness and mortality of the different corps. It will be observed that the highest admission ratio was in the artillery, 1730·0 per 1,000; that of the infantry detachment being 1447·2. The rate for the artillery is slightly in excess of the corresponding rate in the preceding year, but that of the infantry has decreased considerably. Of the 9 deaths 3 occurred in the artillery and 6 in the infantry. The constantly sick rate in the artillery was 79·90 per 1,000, and that in the infantry was fractionally greater. The ratios of sickness in the staff and departments were low, but the average strength was small, so the statistics are not of great value. Taking the troops according to age, it is found that, while the amount of sickness decreases with age, the mortality increases. Thus the admission ratio of men between 20 and 25 years was 1610·6 per 1,000; that between 25

and 30 years 1420·2, and between 30 and 35 years 1000·0. Mortality, on the contrary, was only 17·70 per 1,000 among men from 20 to 25 years of age, but 25·21 between 25 and 30 years, and 44·44 from 30 to 35 years. With regard to service in the Command the admission rate of men in their first year was 1323·3 per 1,000, in their second year 1666·6, and in their third year 1629·7; the mortality ratio in the first year was 22·56, and in the third year 24·69 per 1,000; in the second year there was no mortality.

The admissions, deaths, &c. in the various groups and orders of diseases are shown in Abstract XI.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—Only two admissions for continued fevers occurred, and both of these were cases of *enteric fever*. They were admitted at Curepipe, and both proved fatal. No account is given of their origin. *Dysentery* caused 37 admissions and 2 deaths, being in the ratios of 89·4 and 4·83 per 1,000 respectively; the admission ratio in the previous year was 36·3. The Senior Medical Officer remarks that “dysentery was much more prevalent than in 1885, and this “may have been partly due to want of care in the colder climate of Curepipe, “affecting men who had suffered in Port Louis. The constant wearing of “flannel belts was advised, and this recommendation was carried out.” *Malarial fevers* caused 164 admissions and 2 deaths, equal to ratios of 396·1 and 4·83 per 1,000 respectively. The corresponding ratios in the preceding year were 1477·6 and 8·38, and those of the average of the previous five years 1220·9 and 8·10 respectively. From the above it will be seen that though malarial fevers were still the chief cause of sickness in the island, yet a considerable decrease in prevalence has occurred as compared with former years. The Senior Medical Officer states that “the great majority of the cases arose “at Port Louis, which is a hotbed of malaria, and unfit for the residence of “European soldiers. It is on a flat situation, and urgently needs efficient “drainage. The Line barracks are most unhealthy, being only a few feet above “sea level, and having no effectual system of surface drainage. Some cases of “malarial fevers occurred among the troops at Curepipe, but they were in “men previously poisoned by the climate of Port Louis.” Of the 164 admissions for these fevers 138 were cases of *ague*, and 26 of *remittent fever*; among the latter there were two deaths.

Venerae Affections.—*Primary syphilis* caused 16 admissions, or 38·7 per 1,000. If the admissions for simple venereal ulcer, now returned elsewhere, be added, the ratio would be 62·9 per 1,000, and is comparable with the ratio recorded under this head in the previous year, 128·5 per 1,000, and with the average rate for five years 147·5. The Senior Medical Officer thinks this great reduction must have been, to a great extent, due to the residence of the greater part of the garrison at Curepipe, which is in the country, and offers less temptation to the men. The admission rate for *secondary syphilis*, 21·7 per 1,000, is only fractionally lower than that in the preceding year, but is a good deal below the average. *Gonorrhœa* was the cause of 47 admissions, equal to 113·5 per 1,000 as compared with 97·8 in the previous year, and with 109·7, the average rate. Including all forms of venereal disease the ratio of admission was 198·1 per 1,000, which compares favorably with the rate in the previous year, 248·6, and with the quinquennial average rate, 311·2; the ratio of constant inefficiency on account of these diseases was 16·54 per 1,000, that in the preceding year having been 17·62 and the average rate having been 24·91 per 1,000.

Alcoholism caused 6 admissions. It is stated that “at Port Louis a pernicious compound is sold which has a serious effect on health, and several “cases have occurred in which symptoms of serious disturbance of the mental “function have arisen apparently solely from this cause.”

Rheumatism caused 10 admissions, equal to 24·2 per 1,000, which is below last year's rate and also below the average. Three of the cases were *rheumatic fever*, but all recovered. *Tubercular disease* of the lungs occurred in two instances.

LOCAL DISEASES.—The sickness and mortality from the different orders of local diseases was not great. *Diseases of the nervous system* caused 12 admissions (5 being cases of mental disease), equal to 29·0 per 1,000, which is above the average. *Diseases of the circulatory system* show 14 admissions, or 33·8 per 1,000, being rather less frequent than in the preceding year, 12

Mauritius.

of the cases were palpitation. *Respiratory affections* did not prevail to any extent, 11 admissions only being recorded, of which 9 were bronchial affections. *Diseases of the digestive system* caused 70 admissions, the ratio of prevalence being 169·1 per 1,000, which shows a considerable decline from the corresponding rate in the preceding year as well as from the average rate, but this is due to the registration of cases of dysentery elsewhere, and were the ratio of prevalence of dysentery added the ratio of admission would, on the contrary, show a slight increase. Half the admissions were cases of diarrhoea, and of the remainder dyspepsia, hepatic disease, and affections of the mouth and throat caused the most part. Of the remaining orders of local diseases those of the *lymphatic* and *cutaneous systems* caused the greatest amount of sickness, the ratios of prevalence, 58·0 and 91·8 per 1,000, showing each a considerable increase as compared with the corresponding ratios in the preceding year.

Injuries were more frequent than in the previous year, 61 having occurred as compared with 42; they were mostly of ordinary character, wounds, contusions, &c., and there was one death from drowning, which was a case of suicide, the supposed cause being stated as mental depression.

Invaliding.—16 men were invalided to England, being in the ratio of 38·64 per 1,000, which is fractionally below the rate in the preceding year and is below the decennial average by 5·40. The causes of invaliding were debility 4 cases, nervous diseases (including three of mental affection) 4, cardiac disease 3, tubercular disease of the lung 2, and retinitis, deafness, and diarrhoea, one case respectively. The ratios of invaliding according to ages were, between 20 and 25 years 30·97 per 1,000, between 25 and 30 years 67·23, and between 30 and 35 years 22·22; and the ratios according to length of service in the Command were in the first year 37·59 per 1,000, in the second 66·67, and in the third 24·69.

There were 6 men finally discharged the service as invalids, equal to 14·49 per 1,000, which is fractionally higher than the rate of the previous year, but lower than the decennial average rate by 1·15. The causes of final discharge were mental disease in three instances, and debility, cardiac disease, and deafness in one instance respectively.

Officers.—The average strength was 22, and there were 10 attacks of illness, 4 of them being cases of malarial fever. The sick rate, 454·5 per 1,000, shows a slight increase. There was no mortality or invaliding during the year.

Women.—The average strength was 16, and there were 15 attacks of illness, equal to 937·5 per 1,000, which is a lower rate than in the previous year. The cases comprised 8 of debility, 5 of ague, and 2 of remittent fever.

Children.—In an average strength of 37 there were only 8 attacks of illness recorded, the ratio of prevalence, 216·2 per 1,000, has therefore declined considerably, 4 of the attacks were cases of malarial fever, 1 of bronchitis, 1 of tubercle of intestine, and 2 of infantile convulsions; the last 3 cases proved fatal.

Sanitary Conditions.—The Senior Medical Officer points out that the most noticeable fact in the returns for 1886 is the very great reduction in the amount of sickness among the troops as compared with the preceding year, or with any other previous year, and that this is most plainly seen in the diminished prevalence of malarial fever. He states that this improved condition can only be due to the transfer of the infantry from Port Louis to Curepipe, and he strongly urges the advisability of the removal of every officer and man to that station.

“At Curepipe an improved water supply is desirable and is said to be under consideration. Increased hospital accommodation is needed and could be provided by the erection of a ward to contain 20 to 25 beds. Surface drainage round the officers’ quarters is required to carry off rain water, and prevent it from soaking into the ground underneath the building. The provision of a furnace for drying the earth used in the latrine is an urgent necessity, as the climate is so damp that dry earth is difficult to procure.

“At Fort George, Port Louis, the officers’ quarters are unfit for occupation, as there are rooms in the sea front of them which intercept any breeze and

“ render them hot and ill-ventilated. New quarters with an upper story for *Mauritius*
“ sleeping are much required.
! “ Some improvements have been effected and others are still in progress at
“ Curepipe, among which are the erection of four additional married
“ quarters, and quarters for commanding officer and medical officer ; enlarge-
“ ment of latrine accommodation, improvement in the drainage of the camp,
“ and improvement in the lighting of the hospital wards by painting white
“ the roof of the verandahs.”

X.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF CEYLON.

Sickness and Mortality.

Ceylon.

I.—WHITE TROOPS.

The force serving in Ceylon during the year comprised the 6th Battery, 1st Brigade, Eastern Division, and 8 and 9 Batteries, 1st Brigade, Southern Division Royal Artillery, the 1st Battalion Argyll and Sutherland Highlanders, detachments Royal Engineers and Departmental Corps and Garrison Staff. The 6th Battery, 1st Brigade, Eastern Division, Royal Artillery, embarked for Singapore, and the 8th and 9th Batteries, 1st Brigade, Southern Division, arrived from Hong Kong about the end of January. No draft arrived from home during the year.

The principal statistics of sickness and mortality among the troops are shown in the annexed table:—

Average Strength. 1886.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Average Constantly Sick.
940	1,079	10	—	10	14	10	58·55	1136·9	10·53	14·75	10·53	61·08

Comparing these results with those recorded in the preceding year, it is observed that there is a decrease of 37·4 per 1,000 in the ratio of admission, and one of 1·52 in that of constantly sick, but there is a fractional increase in the rate of mortality; while in comparison with corresponding ratios for the preceding decennial period an increase of 11·9 and 2·61 is observed in the admission and constantly sick ratios, and a decline of 3·70 in the death rate. The average sick time to each soldier was 22·52 days, and the average duration of each case of sickness 19·80 days, which differ only fractionally from the corresponding periods in the preceding year and from those of the decennial average.

The more important of the health statistics of the different corps during the year are given in Abstract XLII. The ratios of admission in the two batteries of the Southern Division of Artillery were 762·4 and 989·5 per 1,000 respectively; that in the battery of the Eastern Division was high, but being only a month in garrison, the average strength is so small that the ratio is of slight value. In the infantry regiment the admission ratio reached 1217·6, and in Garrison Staff and Departments 740·7 per 1,000. The mortality ratio in the artillery batteries taken together was 24·4 per 1,000 dependent on 5 deaths, and that in the infantry 6·97 dependent on the same number. The ratio of constant inefficiency through sickness was in the artillery, 42·24 per 1,000, and in the infantry 67·67. Compared with the preceding year the ratios of sickness are improved in the artillery, but do not differ much in the infantry. The mortality ratios, however, have increased a little in each comparison.

With regard to the influence of age and length of service in the Command *Ceylon.* on sickness and mortality it is calculated that among men under 20 years of age the ratio of admission was 1255·3 per 1,000, between 20 and 25 years 1320·9, between 25 and 30 years 818·2, and over that time 803·7. Mortality was 5·32 per 1,000 between 20 and 25 years, 21·64 between 25 and 30 years, and 18·69 over that period. Among men under one year's service in the Command the admission ratio was 1179·2, in the second year 819·8, and over 2 years' service in the Command 1166·6 per 1,000. All the deaths occurred among men in their first year of residence in the island, the ratio being 12·19 per 1,000. It must be remembered with regard to the deaths in the artillery, a comparatively small strength, that the two batteries arrived from another foreign station.

The admissions, deaths, &c. in the various groups and orders of diseases are shown in Abstract XII.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—Among continued fevers *enteric fever* caused 10 admissions and 4 deaths, being in the ratios of 10·5 and 4·22 per 1,000 of strength respectively; in the previous year there was only one admission and one death, the ratios being 1·2 and 1·24, while the average ratios for five years were 3·4 and 2·12. Of the cases 8 occurred at Colombo and 2 at Galle; three terminated fatally at the former and one at the latter station. The Senior Medical Officer, Brigade Surgeon S. Archer, states that "the disease is endemic among the civil population at both places, and in both the sanitary condition of the town in the vicinity of the barracks has been very unsatisfactory. At Colombo the old moat at the fort running close to the rear of the quarters was little better than an open sewer, but, owing to representations having been made through the military authorities, orders have been given by the colonial government that it should be filled up, and the work is now proceeding."

The admissions for *simple continued fever* were 100 in number, the admission ratio, 105·4 per 1,000, being higher than that in the preceding year by 26·3, and also above the average. The increase in prevalence of this fever is said to have been due to the large proportion of young soldiers in the Argyll and Sutherland Highlanders who had not previously served in a tropical climate. The regiment arrived in the Command late in the preceding year. The largest number of admissions in one month occurred in May, the hottest month, and were 25 in number.

Malarial fevers were the cause of 30 admissions, equal to 31·6 per 1,000, as compared with 81·6 in the preceding year, and with 38·2 the quinquennial average rate. The majority of the cases occurred at Trincomalee or Kandy, and were of a mild type. Of the total number of cases 27 were ague and 3 remittent fever.

In the sub-group of venereal affections the total number of admissions recorded was 329; of these 104 were for *primary syphilis*, the ratio being 109·6 per 1,000. To render this ratio comparable with that in the preceding year it is necessary to add the admissions for simple venereal ulcers, now returned elsewhere; this raises the admission ratio to 162·3 per 1,000, being an increase on the last year's rates of 6·6, and one of 13·5 on the quinquennial average rate. *Secondary syphilis* caused 39 admissions, or 41·1 per 1,000 as compared with 23·5 in the previous year and an average rate of 25·4. *Gonorrhœa* was the cause of 186 admissions, the ratio of 196·0 per 1,000, being higher than the rate in the preceding year by 31·6 and than the average rate by 64·2.

The ratio of admission for all forms of venereal disease was 399·4 per 1,000, that in the preceding year being 343·6, and that of the average of five years 306·0. The ratio of constant inefficiency from these diseases was 25·48 per 1,000 as compared with 23·01 in the preceding year, and with 20·27, the average rate. The Senior Medical Officer states that there is a contagious diseases ordinance in force at all the military stations, but still venereal affections remain very prevalent, and the cause of a large amount of inefficiency. Every endeavour is made to trace the disease, but, as a rule, the necessary information cannot be obtained from the men. It is believed that there is a considerable amount of clandestine prostitution.

Ceylon.

Alcoholism caused 9 admissions and 1 death, 2 of the cases were delirium tremens. The death was due to alcoholic poisoning. It is stated that there was less intemperance than in the preceding year.

Among the general diseases which are not classified *rheumatism* is observed to have caused 17 admissions, the admission ratio being below the average and below the last year's rate. The cases were of the chronic or muscular forms, no admission for rheumatic fever having taken place. *Tubercular diseases* were represented by a single case of tubercle of the lung.

LOCAL DISEASES.—*Nervous affections* caused 10 admissions, including one of mental disease; the admission ratio is below the average, though in excess of that of the previous year. Among the cases were 7 of epilepsy. *Ophthalmic and aural affections* caused 10 and 17 admissions respectively, mostly for disease of a simple character. Seven admissions are returned for *diseases of the circulatory system*; of these 5 were cases of palpitation, one of fatty degeneration of the heart, and one of aortic valve disease; the last two cases were fatal. *Respiratory diseases*, with 14 admissions, were below the average in frequency. Nine of the cases were bronchitis, 2 pneumonia, 2 pleurisy, and one pneumonic phthisis. *Diseases of the Digestive System* caused 152 admissions, the ratio being 160·2 per 1,000. If to this the admission ratio for dysentery, now recorded above, be added the rate would be 170·7, and, being then comparable with the ratio in the previous year, would show a slight increase, but both years compare favorably with average ratios. The most prevalent diseases were sore throat, dyspepsia, and diarrhoea, a considerable increase being observed in the two last-named complaints; but there is a marked decrease in the prevalence of hepatic affections, which is to be attributed, it is believed, to the short period during which the great majority of the men had served in a tropical climate. There was a considerable increase also in the prevalence of *lymphatic and glandular affections*, the admission rate having increased from 24·7 to 47·3 per 1,000; this is probably due to the large proportion of young soldiers, who are more liable to these affections, which in the majority of cases were of constitutional origin. The admission ratio for affections of the *generative system* was 83·2 per 1,000, of which 52·7 was the ratio for simple venereal sore. The remaining orders of local diseases do not call for especial mention except that there was a marked decrease in the prevalence of *cutaneous affections*.

Injuries.—There were two admissions for general injury; one was a case of lightning stroke, in which a man at Colombo suffered from shock, and was slightly scorched by a flash striking the barrack where he was at the time; the other was a case of heat stroke at Galle; both men recovered. One death occurred from drowning, a man having been upset from a boat on the lake at Kandy. Local injuries caused 122 admissions, equal to 128·6 per 1,000; this ratio is a good deal below the average; 109 of the admissions were for contusions, wounds, or sprains, and among the remainder were 4 cases of fracture and 2 of dislocation.

Invaliding.—14 men were invalided to England during the year; the ratio was 14·75 per 1,000 being about half that in the preceding year, and considerably below the average of 10 years. The causes of invaliding were bronchitis 5 cases, epilepsy 2, and dysentery, debility, tubercle of lung, hemiplegia, insanity, hepatitis, and flat foot one case respectively. Of the men invalided home 6, or 10·64 per 1,000, were between 20 and 25 years of age; 7, or 30·30, between 25 and 30; and one, or 9·34, over 30 years of age; and of the total number 12 men, or 14·63 per 1,000, were in their first year of service in the command, and 2, or 111·1, over two years in the island. The number of men finally discharged by invaliding was 10, being in the ratio of 10·53 per 1,000 as compared with 19·78 in the preceding year, and with 14·74, the decennial average rate. The chief disabilities necessitating discharge were tubercular affections and diseases of the nervous and respiratory systems.

Officers.—In an average strength of 51 officers there were 28 attacks of illness, equal to a ratio of prevalence of 549·0 per 1,000, which is an increase of 60·1 on that in the preceding year. Fevers caused most attacks of illness, 11 cases being recorded. No officer died or was invalided during the year.

Women.—There were 25 attacks of illness in an average strength of 49 women, being in the ratio of 510·2 per 1,000, prevalence being greater than in the preceding year. The chief causes of sickness were fevers and debility.

Children.—The average strength was 99, and there were 27 attacks of illness, two being fatal. The ratio of prevalence, 27·27 per 1,000, differs only slightly from the corresponding rate in the previous year. Of the attacks of illness, 14 were cases of conjunctivitis and 4 of fevers. The deaths were due to remittent fever and to premature birth.

Sanitary Conditions.—The Senior Medical Officer reports favorably of the general sanitary condition of the Command; he states that “there has been no overcrowding, and the ventilation of barracks at all stations has been satisfactory. The cooking has been sufficiently varied, but there is a want of variety in the meat ration. An important change in the composition of the meat ration has been authorised. Formerly $\frac{3}{4}$ lb. of English potatoes were issued three days a week with $\frac{1}{2}$ lb. of native vegetables, and on the remaining four days yams were substituted for the English potatoes. The improved ration consists of 8 ozs. of English potatoes and 6 ozs. native vegetables daily. This alteration has been much appreciated by the men, most of whom had a distaste for the yams and sweet potatoes which heretofore formed the bulk of the vegetables issued.

“The water supply has been greatly improved at Colombo. It is now brought by pipes from a reservoir 25 miles distant, and is distributed in the barracks. The quality is excellent and the quantity unlimited. The pipes for supplying the hospital will be laid shortly.

“The construction of a plunge bath for the troops has been sanctioned and will be shortly commenced; water will be supplied from the town mains.

“At all the out-stations the sanitary condition of barracks, &c., is reported to be satisfactory.

“The following sanitary services were completed during the year:—Reflooring of one block of Nos. 2 and 3 barracks at Trincomalee, and at Kandy a prisoners’ room erected at the main guard. The following are included in the estimates for the next year:—Lightning conductors to be fixed at Colombo, and the flooring of the barracks at Trincomalee to be finished.”

II. ASIATIC TROOPS.

The native troops consist of one company of Gun Lascars and a few Mounted Orderlies. The former are distributed between the stations of Colombo, Trincomalee and Galle and the latter are quartered at Colombo as escort to the governor. The average strength of the Gun Lascars was 88, and of the Orderlies 9.

There were 31 admissions into hospital, being in the ratio of 31·96 per 1,000, and the average ratio constantly sick was 15·77, both of which compare favorably with the preceding return. There was no death and no invaliding. The general health of the men was excellent, and there was no prevalence of any disease. The sanitary condition of their quarters was satisfactory at all stations.

XI.—ON THE HEALTH OF THE TROOPS SERVING IN CHINA AND THE STRAITS SETTLEMENTS.

Sickness and Mortality.

I.—WHITE TROOPS.

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The average strength of the troops serving in the Command during the year was 2,269, and the force was composed as follows:—At Hong Kong, average strength 1,132, the 1st Battery, 1st Brigade, Lancashire Division, and 5th Battery, 1st Brigade, Eastern Division, Royal Artillery; the 2nd Battalion Northamptonshire Regiment; detachments Royal Engineers and Departmental Corps and Garrison Staff; also, from the 1st to 16th January, the 8th Battery, 1st Brigade, Southern Division, Royal Artillery. At the Straits Settlements, average strength 1,137, the 2nd Battery, 1st Brigade, Southern Division, Royal Artillery, throughout the year, the 6th Battery, 1st Brigade, Eastern Division from the 5th February to 31st December, and the 9th Battery, 1st Brigade, Southern Division, for the first 20 days of January; also the 1st Battalion East Kent Regiment, detachments Departmental Corps and Garrison Staff throughout the year.

In the following table are shown the principal statistics of sickness and mortality among the troops in the command, and also the proportions in which the two divisions of the command contributed to these results:—

1886. Stations.]	Average Strength.	Admissions.	Died.			Invalided Home.	Invalids finally Discharged.	Average daily Sick.
			In the Command.	Invalids.	Total.			
Hong Kong. . . .	1,132	1,356	8	1	9	16	} 20	53·61
Straits Settlements . .	1,137	1,309	17	—	17	6		53·51
Total	2,269	2,665	25	1	26	22	20	112·12

(continued.)

1886. Stations.	Ratio per 1,000 of Strength.					Average Sick Time to each Soldier.	Average duration of each Case of Sickness.
	Admissions.	Deaths.	Invalided Home.	Finally Discharged as Invalids.	Constantly Sick.		
Hong Kong	1197·8	7·95	14·14	} 8·81	51·77	18·90	15·78
Straits Settlements . .	1151·2	14·95	5·28		47·06	17·18	14·92
Total	1174·5	11·45	9·69	8·81	49·41	18·03	15·35

Comparing the ratios of sickness and mortality in the whole command with the corresponding ratios in the preceding year, an increase is observed in all, being 52·9 per 1,000 in ratio of admission, 6·46 in that of constantly sick, and a small fraction in that of mortality, but compared with the average rates for the preceding 10 years there is an increase of 126·8 per 1,000 in admission rate, and one of 1·15 in the death rate, while there is a fractional decrease in the ratio of constant inefficiency through sickness. The average sick time to each soldier, 18·03 days, and the average duration of each case of sickness, 15·35 days, were longer than in the preceding year by 2·35 and 1·37 days, but shorter than the average periods in the preceding decennium by ·07 and 1·92 days respectively.

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In the Hong Kong division of the command as compared with the corresponding results in the previous year there was an increase of 311·9 per 1,000 in the admission ratio and one of 14·34 in that of constantly sick, but there was a decline in the death rate of 9·09. The average sick time to each soldier, 18·90 days, was longer by 5½ days, and the average duration of each case of sickness was longer by nearly half a day.

In the Straits Settlements there was, on the contrary, less sickness and more mortality than in the preceding year; a decrease of 214·7 per 1,000 having taken place in the admission ratio and one of 1·61 in the constantly sick rate, while the death rate has increased by 8·43. The average sick time to each soldier was shorter by rather more than half a day, and the average duration of each case of sickness longer by nearly two days.

In Abstract XLII, will be found the ratios of sickness and mortality of the different corps which served in the command during the year. Taking the batteries of Artillery together, it is observed that the admission ratio was 938·2 per 1,000 and the constantly sick ratio 51·30, both of these showing a considerable increase as compared with the return in the preceding year; the mortality rate 20·64 is also higher.

In the 1st Battalion East Kent Regiment the ratio of admission was 1276·5 per 1,000, the death rate being 13·55 and the constantly sick rate 48·30. The ratios of sickness have decreased, but that of mortality has increased as compared with the last year's return.

The 2nd Battalion Northamptonshire Regiment shows a high rate of admission, 1,332·9 per 1,000, but a low mortality rate, 3·74; the daily sick rate, 55·71, is also high. The regiment was only in the command a short time in the previous year, so that a comparison with the last return would not be of much value.

The ratios of sickness and mortality in the detachments Royal Engineers and Departmental Corps were small.

With regard to the influence of age and length of service in the Command on sickness and mortality it has been calculated that the admissions among men between 20 and 25 years of age were in the ratio of 1786·7 per 1,000, between 25 and 30 years 923·3, between 30 and 35 years 695·5, and over that age, 702·7; and that mortality in the first two periods was 11·79 and 11·42 per 1,000 respectively, increasing in the period from 30 to 35 years of age to 16·46, and over that age to 20·27. During the first year of service in the Command the admission rate was highest, 1365·3 per 1,000, in the second year it was 665·1, in the third, 748·3 and over that time 411·8. The death rate in the first year of service in the Command was 12·16, in the second year 4·56, in the third 19·87, beyond which time no mortality occurred.

The admissions, deaths, invaliding, &c., among the troops in the Command, in the various groups and orders of diseases, are shown in Abstract XIII.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—The majority of the admissions in the first sub-group of these diseases were caused by continued fevers, 275 out of a total of 294. Among them were four cases of *enteric fever*, of which two proved fatal; in the previous year there were also four cases, but only one death. All the cases in the year under report occurred in the Straits Settlements, three cases, one fatal, at Penang, and one fatal case at Fort Canning, Singapore. The admissions for *simple continued fever* were in the ratio of 119·4 per 1,000, which is lower than the corresponding ratio in the preceding year, and is also considerably below the average rate. Of the cases 56 occurred in Hong Kong and the remainder, 215, in the Straits Settlements, 165 being recorded at Tanglin alone, of which it is stated

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that they were with very few exceptions of a mild type, only necessitating a short stay in hospital. Of the cases at Hong Kong it is said that they were, as a rule, slight, and were readily cured.

One admission is returned under the head of *cholera*. This occurred at Penang, and is said to have been "simply a sporadic case, unaccompanied by any diarrhoea epidemic amongst the troops, and was evidently attributable to indiscretion on the part of the man himself."

Seventeen admissions for *dysentery* are recorded, 15 cases, one of which was fatal, having occurred at Hong Kong, and 2 at Fort Canning. Of the former it is stated that most of the cases occurred at the commencement of the cold season, and in men already weakened by climate and malaria, and it was impossible to trace them to impure water or any sanitary defect.

Malarial fevers were the cause of 903 admissions and 3 deaths, the ratio of admission being 398.0 per 1,000 as compared with 159.5 in the preceding year, and being considerably greater than the average rate. The ratio of constant inefficiency from these fevers amounted to 10.23 per 1,000, being more than double the ratio in the preceding year, and the average rate. Of the cases 437 occurred in Hong Kong and the remainder in the Straits Settlements. Taking the former first it is found that 331 cases were ague and 106 remittent fever, and that the three deaths all occurred from the latter disease. The medical officer in charge, Station Hospital, Surgeon-Major W. Ffolliott, reports that "from the middle of July till the close of the year malarial fevers might be said to be epidemic in the colony, not only amongst the troops but the civil population also. The outbreak, in my opinion, was attributable to two causes, 1st, disturbance of the soil, and, 2ndly, an unusually dry season. The extensive excavations, cuttings in the hill side, and upturning of earth that is at present going on in the making of new roads, digging foundations for houses, works for the construction of new forts, an aqueduct, &c., have caused a disturbance of the soil over the greater part of the limited area on which the town of Victoria is built. The rotten granite of which the soil is composed is believed to be very malarious, and in former years outbreaks of this type of fever among the coolies employed in road making was no unusual occurrence. It is therefore assumed that this was one of the causes of this epidemic of paroxysmal fevers. The second supposed cause was the fall in the subsoil water forcing the noxious malarial gases from the subsoil beds of laterite and withered granite into the atmosphere. In the early part of July there was a heavy rainfall, which was followed soon after by great heat and drying up of the surface. In August, September, and October the rainfall was considerably below the average and the subsoil water was in consequence unusually low."

It is stated also that in the earlier part of the outbreak the majority of the cases were remittent, and much more severe than towards the end, when the prevailing type became an intermittent quotidian.

In the Straits Settlements there were 466 admissions for malarial fevers, all being cases of ague. With the exception of two cases at Fort Canning and three at Penang, all occurred at Tanglin, the admission ratio for these fevers alone being 694.3 per 1,000. The medical officer in charge, Surgeon Major J. J. Crean, in his report for the preceding year attributed the prevalence of malarial fevers to the influence of a large swamp in the vicinity of barracks, and he now remarks that he has "nothing further to add to that statement except that the experience of the year just passed but too well justifies the opinion then expressed. Fevers of the intermittent and remittent class are by no means prevalent among the civil population of Singapore, and they certainly are not so among the European inhabitants whose houses are ordinarily healthy situations. There must therefore exist some special cause for their prevalence among the troops at Tanglin. The very striking immunity enjoyed by the women and children of the garrison, whose bungalows are all situated on the opposite slope of the hill, and are therefore removed from the influence of the swamps, points strongly to the latter being the source of the evil amongst the men." He further points out that but for the prevalence of these climatic fevers Singapore would compare favorably as regards health with many home stations, but so long as the troops at Tanglin are quartered in their present position, exposed to the influence of these swamps, so long will they show a high ratio of sickness from malarial fevers.

In the sub-group of venereal diseases it will be noticed that *primary syphilis* caused 72 admissions in the whole Command, equal to a ratio of 31.7 per 1,000; and if to these the admissions for simple venereal ulcer, now returned elsewhere according to the recent regulations, be added, the ratio is raised to 41.0 per 1,000, which is higher than the corresponding ratio in the preceding year by 6.7, but differs only fractionally from the average ratio of the previous five years. The admissions for *secondary syphilis* numbered 87, the ratio per 1,000 being 38.3, which is above the previous year's rate by 13.6 and above the quinquennial average rate by 21.0. *Gonorrhoea* caused 197 admissions, the ratio per 1,000 of strength being 86.8; this is an increase of 6.8 on the corresponding rate in 1885, and one of 3.4 on the average rate. Including all forms of venereal disease, the ratio of admission amounted to 166.1 per 1,000, being higher than the previous year's ratio by 27.1, and higher than the quinquennial average by 17.9. The ratio of constant inefficiency from these affections was 11.62 per 1,000, that in the previous year having been 8.91 and the average rate being 11.0. With regard to the two divisions of the Command the admission ratio for all forms of disease at Hong Kong was 197.9 per 1,000 as compared with 146.3 in the previous year, and the ratio of constant inefficiency was 14.01. In the Straits Settlements the admission ratio was 134.6 as compared with 131.3, and the rate of constantly sick was 9.23 per 1,000. At Hong Kong there were comparatively few admissions for primary syphilis, but many for secondary disease. The medical officer in charge states that the former may be in great measure ascribed to the manner in which the Contagious Diseases Act is carried out in the Colony, while the latter was due to the fact that most of the cases of secondary disease were re-admissions, the primary disease having been contracted at other stations whence certain corps had recently arrived.

Alcoholism was the cause of 20 admissions and 3 deaths; in the preceding year there were 32 admissions and one death; 12 of the cases were alcoholism with 1 death, and 8 delirium tremens with 2 fatal cases.

Among the general diseases not classified *rheumatism* caused 24 admissions, or in the ratio of 10.6 per 1,000. Rheumatic affections were much less frequent than in the preceding year and than the average of previous years. No case of rheumatic fever occurred. *Tubercular diseases* caused only 2 admissions for lung affection; and the remainder of the admissions, under this group were chiefly cases of anæmia and non-malignant new growths.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 21 admissions, 4 being for mental disease. The admission ratio, 9.3 per 1,000, compares favorably with that in the previous year and is below the average. Two deaths are recorded, one from meningitis and the other from mania. *Ophthalmic affections* caused an admission rate of 12.8 per 1,000, and diseases of other organs of special sense one of 7.1, both of which are lower than average rates. Conjunctivitis and inflammation of the external meatus caused the greater part of the admissions. *Diseases of the circulatory system* caused 16 admissions and 2 deaths; the admission ratio, 7.1 per 1,000, being less than half that in the previous year and considerably below the average. Among the cases treated were 7 of valve disease and two of fatty degeneration of heart with fatal result, one at Hong Kong and the other at Tanglin. *Respiratory affections* show 68 attacks and 3 deaths. The admission ratio, 30.0 per 1,000, is greater by 5.3 than in the previous year, but is still below the average rate. Half the admissions took place in the Hong Kong division of the Command, and of the remainder all but one, and all the deaths, occurred at Tanglin. Bronchial affections caused 56 of the admissions, and among the remainder were 4 cases of pneumonia, 2 fatal, 4 of pneumonic phthisis, 1 fatal, and 2 of pleurisy. *Diseases of the digestive system* were the cause of 193 admissions, and 2 deaths. The admission ratio per 1,000, 85.1, was considerably below the average rate and compares favorably with 130.3, the last year's rate, even were the admissions for dysentery added, which by change in registration are now shown elsewhere. Three-fourths of the cases and one of the deaths occurred at Hong Kong. The principal causes of admission were diarrhoea, dyspepsia, and affections of the mouth and throat, and there were 31 admissions for hepatic disease, of which 27 took place at Hong Kong. The deaths were both due to abscess of the liver. *Diseases of the lymphatic system*, with a ratio of 16.7 per 1,000, were below the average, but were not much less frequent than in the preceding year. *Urinary affections*

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caused only 8 admissions, but there was one death from Bright's disease. *Diseases of the connective tissue* were in excess of the previous year the admission ratio being 46·7 per 1,000, and they were considerably above the average in frequency. *Cutaneous affections* also, though less frequent than in the previous year, the ratio having fallen from 117·9 to 91·2 per 1,000, were more prevalent than in the average of former years. Among 207 admissions were 34 for ulcers, 54 for boil, 21 for itch, and 40 for ringworm. 32 cases of the latter disease occurred in Tanglin, principally in one regiment, the 1st East Kent Regiment, and the medical officer in charge remarks that they appear to have brought it with them,

Poisons caused 3 admissions; one was poisoning by oxalic acid taken in mistake for Epsom salts; the case was seen early, antidotes administered, and it did well. The other two admissions were cases of poisoned wounds. All occurred at Hong Kong.

Injuries.—Five admissions and 3 deaths are recorded for general injury; 4 of the admissions were for sunstroke at Tanglin, 2 were of a severe character, and one was fatal. There was one admission for multiple injury with fatal result, a man having fallen from a verandah at Hong Kong while in a state of somnambulism, and among other injuries fractured his pelvis. The third death was due to accidental drowning, a man having fallen overboard from a steam launch while crossing the harbour. The number of admissions for local injuries was 188, being in the ratio of 82·9 per 1,000, not so frequent as in the preceding year. The principal causes of admission were contusions, wounds, and sprains, and one fatal case occurred at Fort Canning from gunshot wound of the chest. Two cases of attempted suicide are recorded, one at Tanglin; a man suffering from acute mania cut his throat severely, but the hæmorrhage was controlled after some difficulty: the other case was at Fort Canning; a man suffering from delirium tremens stabbed himself in the side and tried to cut his throat, but the wounds were trivial.

Among the operations performed during the year are mentioned one of removal of growth from rib, with successful result; also the operation of iridectomy, successful, aspiration of thorax on account of empyema, with fatal result, and several minor operations, successful.

Invaliding.—The number of men invalided home during the year was 22, being in the ratio of 9·69 per 1,000, considerably below the corresponding rate in the previous year, and the average rate for the preceding 10 years. Among the causes of invaliding were debility, 4 cases, valve disease of heart 3 cases, secondary syphilis 2 cases, and 13 diseases with single cases each. With regard to the influence of age and service in the Command it has been calculated that the ratio of invaliding between 20 and 25 years was 8·57 per 1,000, between 25 and 30 years 14·68, between 30 and 35 years 4·11, and over that age 27·03. The ratio of invaliding in the first year's service in the Command was 10·94 per 1,000, and in the third year 6·62. The number of men finally discharged as invalids was 20, being in the ratio of 8·81 per 1,000, a decrease of 13·13 from the rate in the previous year and one of 9·03 from the decennial average rate. The principal disabilities necessitating final discharge were nervous affections 4 cases, debility 3, cardiac disease 3, and respiratory affections, diseases of the organs of locomotion, and injuries, 2 cases respectively.

Officers.—The average strength was 97; there were 53 attacks of illness, and 4 officers were invalided. The ratio of prevalence of sickness was 546·4 per 1,000, as compared with 648·4 in the preceding year. The chief causes of sickness were fevers, diseases of the digestive system, and injuries. There was no death. The causes of invaliding were secondary syphilis, debility, diarrhoea, and wound, one case respectively.

Women.—In an average strength of 95, there were 77 cases of illness, excluding ordinary cases of parturition, and there were 2 deaths; the ratio of attack was therefore 810·5 and that of mortality 21·05 per 1,000, the former being below and the latter above the corresponding ratios in the previous year. Among the cases treated were 26 of malarial fevers, 12 of debility, and 11 of diarrhoea. The causes of death are returned as syncope and gastritis, one case of each.

Children.—The average strength is recorded as 120, and there were 50 attacks of illness and 10 deaths, being in the ratios of 416·6 and 83·33 per 1,000 respectively, which differ but little from the corresponding rates in the

previous year. The principal diseases treated were fevers, digestive disorders, *China and* and debility. The deaths are returned as follows:—Debility, 3; convulsions, *Straits* 2; diarrhoea, 2; bronchial affections, 2; and malformation of intestine, 1 *Settlements.* case.

Sanitary Conditions.—The Principal Medical Officer, Deputy Surgeon-General Robert Lewer, reports that at Hong Kong the disturbance of the disintegrated granite soil in the construction of forts, tramways, and roads, is said to have been the cause of the increase of sickness from malarial fevers among the troops. He was unable to state this from his own experience, having only recently arrived in the command, but he remarks that the experience of others conclusively shows that the upturning of new soil in this colony is largely productive of malaria.

"At Tanglin there are on the south, east, and west of the barracks extensive fresh water swamps, covering an area of about 5 square miles, with patches of dense jungle interspersed. These swamps are caused by the drainage from the hills, by which they are bounded on all sides, and on one of which the barracks and hospital are located. The nearest edge of the swamps is about 300 yards distant from barrack bungalows P, Q, R, and S, and the health of the troops quartered in these bungalows has been so seriously affected that I advised that they should be abandoned and others built on a healthier site. This appeared to be the best course to adopt as the draining of the swamps would be an extensive and costly undertaking."

The following sanitary improvements were effected during the year:—At Hong Kong "the drains from the north barracks and the west block, married quarters, which opened in the foreshore, have been extended beyond low-water mark. A nullah, which runs in the immediate vicinity of the Victoria barracks, has been cemented in that part of its course which is nearest the barracks, and large boulders which dammed back the water into stagnant pools have been broken up, thus admitting of a free current. As funds become available the cementing of this nullah will be extended in the hope that by covering in the large extent of disintegrated granite, which is now alternately exposed to water and sun, the probable cause of malarial fever in two of the adjoining barrack buildings will be removed. Eucalyptus trees have been planted in the neighbourhood of the barracks, and much vegetation removed. Quarters for four officers and a small mess room have been completed at the Sanitarium; also a recreation room for the men."

At Tanglin two bungalows, to accommodate 40 men each, were completed. Eucalyptus trees were planted between the swamps and the barracks. The drainage of the rifle range has been completed. At the hospital reconstruction of latrines, provision of urinal, and erection of a disinfecting chamber were carried out. At Penang a bath, cookhouse, and latrines were erected for the married quarters, and a new ablution room was built. At Fort Canning an ablution room was provided for the garrison cells.

II.—ASIATIC TROOPS.

The Asiatic troops in the Command consist of the head-quarters and two companies of Gun Lascars stationed at Hong Kong, with a small detachment at Fort Canning, Singapore. The average strength was 189; there were 252 admissions into hospital, one death, and 6·46 men constantly sick. The ratio of admission was 1333·3 per 1,000, the death rate 5·29, and the rate of constant inefficiency 34·18. Compared with the corresponding rate in the preceding year there is an increase of 226·9 in the admission rate, but a considerable decrease in mortality. The invaliding ratio, 26·45 per 1,000, only differs fractionally in this comparison. The principal cause of sickness was malarial fever, 151 of the admissions being caused by it. Of these cases 135 were ague, and 16 remittent fever, one of which was fatal. Among other diseases the most prevalent were bronchial affections, digestive disorders, dysentery, and cutaneous diseases. The causes of invaliding were debility two cases, and tabes mesenterica, leucocythæmia, and bronchitis one case respectively.

XII.—ON THE HEALTH OF THE TROOPS SERVING IN INDIA.

*Sickness and Mortality.**India.*

The average strength of the warrant officers, non-commissioned officers, and men in India was 61,757 (exclusive of those on field service in Upper Burmah); the admissions into hospital were 91,630; and the deaths 958, of which 924 took place in India, and 34 (being those of invalids) on the passage to or after arrival in England. The average number of constantly sick was 4563·89. The rates from these numbers are, for admissions 1483·7, for deaths 15·51, and for constantly sick 73·90 per 1,000 of the strength.

The sickness for each of the three Commands is shown in the following table :—

—	Average Annual Strength.	Admitted into Hospital.	Deaths.			Inva- lids sent Home.	Inva- lids dis- charged the Service.	Average Con- stantly sick.
			In India.	Of In- valids.	Total.			
Bengal - -	39,558	59,966	602	23	625	724	373	2846·45
Madras - -	11,199	15,296	182	4	186	267	169	903·63
Bombay - -	11,000	16,368	140	7	147	309	121	813·81
Total - -	61,757	91,630	924	34	958	1,300	663	4563·89
Ten years, 1876 } —85 - - }	556,783	838,513	8,932	582	9,514	20,198	9,388	36023·00

continued.

—	Ratio per 1,000 of Mean Strength.					Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
	Ad- mitted.	Died.	Inva- lided Home.	Inva- lids dis- charged.	Con- stantly sick.		
Bengal - -	1515·9	15·80	18·30	9·43	71·96	Days. 23·26	Days. 17·33
Madras - -	1365·8	16·60	23·84	15·09	80·68	29·45	21·56
Bombay - -	1488·0	13·36	28·09	11·00	73·98	27·00	18·15
Total - -	1483·7	15·51	21·05	10·73	73·90	26·97	18·18
Ten years, 1876 } —85 - - }	1506·0	17·08	36·27	16·86	64·60	23·61	15·68

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During the year under review the strength of the troops in the Bengal Command was higher by 4,457 than that of the previous year. This increase was caused by the transfer of the Quetta district from the Bombay Presidency to Bengal in April 1886, and by the additional troops sent out from England in augmentation of the strength of the corps serving in the Command.

The average strength of warrant officers, non-commissioned officers, and men serving in the Command was 39,558. The principal statistics of their sickness and mortality are as follows:—

1886. Average Strength.	Admissions.	Deaths.			Invalids.		Average daily Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally dis- charged.	Average con- stantly Sick.
39,558	59,966	602	23	625	724	373	2846.45	1515.9	15.80	18.30	9.43	71.96

Compared with the corresponding ratios for the preceding year a decrease of 133.3 per 1,000 has occurred in the ratio of admissions, and one of 1.21 in that of constantly sick, but the death rate has increased by 2.19; and, comparing these ratios with those of the average of the 10 previous years, a decrease of 68.8 per 1,000 is observed in the admission rate, and one of 2.20 in the death rate, but the ratio of constant inefficiency through sickness is increased by 5.28. The average sick time to each soldier was 26.26 days, and the average duration of each case of sickness 17.33 days, the former being shorter by 44 days and the latter longer by 1.14 days than the corresponding periods in the previous year, while both are longer than the decennial average periods by 1.92 and 1.97 days respectively.

The loss to the force in the Command by death and invaliding to England during the year was 1,326 men, and the total loss to the army by deaths and final discharge as medically unfit among troops belonging to the Bengal Command was 998, or in the ratio of 25.23 per 1,000 below the corresponding ratio in 1885 by 2.14.

In Abstracts XV. and XVI. are tables taken from the report of the Principal Medical Officer showing the sickness and mortality among the troops in the different administrative divisions and in the different stations in the Command respectively. From the former it will be observed that the admission ratio is increased in the administrative divisions of the Presidency, Allahabad, Saugor, and Rawal Pindi, while it is decreased in all the others. The highest admission ratio in any circle was 1989.2 per 1,000 in that of Quetta, the next being 1949.6 in that of Allahabad; the lowest ratios of admission were 1286.6 and 1311.0 per 1,000 in Oudh and Rohilcund respectively. The highest ratio of mortality in any circle was 30.26 per 1,000 in Gwalior, the next being 21.53 in the Allahabad circle; the lowest rate of mortality was 13.20 in Rohilcund, 13.44 in the Meerut circle being next above.

The highest admission rate in any station, not being a convalescent dépôt and having a strength of over 100 men, occurred at Allahabad, where it amounted to 2791.4 per 1,000, which is 749.6 higher than in the preceding year, and 1182.6 higher than the average for the previous decade; it is also above the rate for the whole Command by 1275.5. This high admission ratio was due to the prevalence of malarial fever and venereal complaints. The ratio of prevalence of sickness is also high at Delhi, though not so much so as in the preceding year or as the decennial average rate; the cause of sickness was principally malarial fever; in Barrackpore there was a high admission rate,

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2674·5, which is increased as compared with either the average or last year's rate, ague was the principal cause of admission; at Mean Meer the ratio, 2354·0, is rather higher than in the previous year, but not equal to the average; venereal diseases as well as malarial fevers were prevalent causes of sickness; at Fatehgarh the ratio, 2351·6, was due principally to the same diseases this ratio is above the average, but less than in the preceding year; and at Quetta there was also a high admission rate, due to malarial fevers chiefly, 2276·1 per 1,000.

Of the stations in the plains the lowest annual admission rate is found at Fortress Gwalior, 865·7 per 1,000, but as the troops only occupied the place for two of the healthiest months in the year, January and February, the ratio is not a fair one. Exclusive of the above the lowest admission ratio was 1157·3 per 1,000 at Sitapur, which is considerably below the last year's rate and below the average, followed by Morar with 1162·7, and by Benares with 1203·3, Campbellpore 1214·0, Umballa 1220·9, Sialkot 1252·2, Lucknow 1277·2, and Mooltan 1284·6, all of which are below the corresponding rates in the preceding year as well as below similar decennial average rates. Comparatively low ratios of admission are also observed in Shahjehanpur 1324·7, Fyzabad 1384·4, Jubbulpore 1385·5 and Agra 1387·8 per 1,000, which is considerably below the average for the Command.

Among the convalescent depôts Pachmarhi, with an annual average strength of 95, gave a ratio of prevalence of sickness of 3189·5 per 1,000, which is higher than that in the previous year by 996·5, and above the average of the previous decade by 1704·8; here also malarial fever was the chief cause of sickness. At Kasauli also there was a high ratio of prevalence of sickness, 2830·2 per 1,000, which is above the decennial average by 916·4, but lower than the corresponding rate in the previous year by 472·6.

Among the stations in the hills, not being convalescent depôts, and having an average strength of 150 or upwards, Solon had the lowest admission rate, 761·1 per 1,000, followed by Ranikhet with 829·2. These are a good deal below the corresponding average rates; next in sequence come Jutogh 1118·9, and Chakrata 1143·0.

The highest mortality ratio, 50·85 per 1,000, occurred at Fort Lahore, where there were six deaths all among men of the 3rd Battery, 1st Brigade, Scottish Division Royal Artillery, including two cases of enteric fever and one each of rupture of the spleen, cancer, dysentery, and pneumonia; the next highest ratio was 43·22 at Jhansi, chiefly due to enteric fever, then Jullundur 42·99, due to various causes but chiefly to enteric and remittent fevers. At Morar and Fort Attock in the plains and at several hill stations there were no deaths, and low death rates occurred at the following stations: Naini Tal 4·78 per 1,000, Ferozepore 4·91, Dum Dum 5·17, Nowgong 6·12, Kasauli 6·17, Barrackpore 7·94, Agra 7·34, Campbellpore 8·23, and Quetta 8·84 per 1,000.

The most important of the health statistics of the arms of the service as well as of the different corps which served in the Command during the year will be found in a table given in Abstract XLIII. and taken from the report of the Principal Medical Officer, Surgeon-General C. D. Madden.

The average strength of the cavalry was 3,041, and the ratio of admission 1711·9, per 1,000, that of death 18·74, and that of constantly sick 81·49. Contrasted with the corresponding table in the preceding year there is a decline of 250·0 in the admission ratio, and one of 1·60 in the constantly sick ratio, but there is an increase of 1·73 in the rate of mortality. The average sick time to each soldier was shorter by half a day, but the average duration of each case of sickness longer by nearly two days than in the preceding year.

The cavalry regiment with the highest admission rate was the 8th Hussars, quartered at Meerut, the rate was 2680·2 per 1,000; this corps also had the highest rate of constant inefficiency, 118·44. The lowest admission ratio is found in the 6th Dragoon Guards quartered chiefly at Sialkot, 1314·9, but the highest mortality ratio, 34·76, per 1,000, also occurred in this corps, dependent on 17 deaths. The lowest mortality ratio was 7·58 in the 17th Lancers, stationed the whole year at Lucknow. The lowest rate of

constant inefficiency was 68·04 per 1,000, in the 3rd Dragoon Guards, at *Bengal*. Muttra during the greater part of the year.

In the artillery the average strength was 5,882; the admission ratio equalled 1519·9, the mortality rate 13·43, and the constantly sick rate 68·86 per 1,000. Compared with the corresponding results in the previous year a considerable decrease is observed in the ratios of admission and constant inefficiency, equal to 230·8 and 11·04 respectively. The mortality ratio on the other hand is increased by 3·59. There was also a considerable decrease in the average sick time to each soldier, and a slight one in the average duration of each case of illness.

The ratios of prevalence of sickness and mortality vary considerably on account of the comparatively low average annual strength of the batteries, those of some being very small. Thus No. 3 Battery, 1st Brigade, South Irish Division, with an average strength of 24, being only three months in the country, shows an admission rate of 3083·3 per 1,000; but of batteries which were one year and over in the Presidency, O Battery, 4th Brigade, quartered at Mean Meer, had the highest admission rate, 2699·3; followed by 7 Battery, Cinque Ports Division, quartered at Delhi, with 2510·2, and by P Battery, 3rd Brigade, with 2417·1, quartered at Barrackpore, for the greater part of the year. The lowest admission ratio was 673·9 per 1,000, but this occurred in a battery not six months in the country, the average annual strength was therefore small; in the 1st Battery, 1st Brigade, London Division, at Campbellpore, the rate was 850·0, in 1st Battery, 1st Brigade, Eastern Division, partly at Pindi and partly at Kalabagh, the rate was 970·6, and D Battery, A Brigade, at Sialkot throughout the year, the rate was 972·0 per 1,000. With regard to mortality it is observed that in 13 batteries there was none, and of batteries of fair average annual strength the highest rate was 45·45 per 1,000, dependent on seven deaths, in Q Battery, 3rd Brigade, stationed at Saugor; the lowest ratio in any battery in which mortality occurred was 5·46 in G Battery, 1st Brigade, at Cawnpore.

The ratios of constant inefficiency varied between 140·37 per 1,000 in 3rd Battery, 1st Brigade, Scottish Division, chiefly at Fort Lahore, and 26·45 in 5th Battery, 1st Battery, Western Division, at Quetta.

The infantry had an average strength of 29,133; the admission ratio was 1529·2, the death rate 14·38, and the average daily sick rate 71·82 per 1,000. Compared with results in the previous year there is a decline of 105·6 in admission rate, but an increase of 1·86 in the rate of mortality, and a fractional one in that of constantly sick. The average sick time to each soldier was slightly longer and the average duration of each case of sickness longer by rather over one day. It was at Delhi that the highest admission rates in particular corps occurred, the half battalion Suffolk Regiment quartered there for two months, giving a rate of 2888·9, and the half battalion 2nd Lincolnshire Regiment stationed there the remaining 10 months, a rate of 2880·3 per 1,000. The 1st Durham Light Infantry and the 2nd Battalion, Lancaster Regiment, also show high rates, 2774·4 and 2758·2 per 1,000 respectively, at Allahabad and Quetta. The lowest admission rate was 627·1 in the 1st Battalion, East Surrey Regiment, at Ranikhet 10 months of the year, followed by 923·7 in the 4th Battalion, Rifle Brigade, at Chakrata and Meerut chiefly. The highest mortality ratio, 56·60 per 1,000, occurred in the various detachments of the Royal Welsh Fusiliers (giving an aggregate strength of 318) quartered at Lucknow, Ranikhet, and Calcutta. The next highest rates are found in the 2nd Devonshire Regiment, 38·27, at Jhansi, Sipri, and Gwalior, and in the Connaught Rangers, 32·10, at Jullundur. The lowest death rate was 3·33 in the East Surrey Regiment, the next above being 4·28 in the 1st Suffolk Regiment at Roorkee, Rawal Pindi, and Kuldunah. The highest rates of constant inefficiency were 145·79 and 136·88 per 1,000 in the detachments of the Royal Welsh Fusiliers and 2nd Liverpool Regiment, the headquarters of these corps being in Burma; the lowest ratios of daily sick were 38·17 in the 1st Battalion, East Surrey Regiment, at Ranikhet, 38·52 in the 1st Battalion, North Lancashire Regiment, at Quetta, and 45·39 per 1,000 in the 2nd Battalion Cheshire Regiment, at Solon and Umballa.

With a view of observing the influence of age and of residence in the country on sickness and mortality among the troops, calculations have been made, the results of which are given in the following tables:—

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TABLE showing the influence of Age on the Sickness, Mortality, and Invaliding among the Troops in the Bengal Command, during the year 1886.

Ages.	Average Strength.	Admissions.	Deaths.	Invalidated.	Ratios per 1,000 of Strength.		
					Admissions.	Mortality.	Invaliding.
Under 20 years -	2,024	2,000	36	9	988·1	17·79	4·45
From 20 to 24 years -	16,404	34,626	234	299	2110·8	17·92	18·23
„ 25 „ 29 „ -	11,168	17,373	173	235	1555·6	15·49	21·04
„ 30 „ 34 „ -	3,819	4,087	57	89	1070·2	14·92	23·30
„ 35 „ 40 „ -	1,806	1,423	31	65	787·9	17·16	35·99
„ 40 upwards -	441	380	11	28	861·7	24·84	63·49
Not stated -	3,896	77	—	—	19·8	—	—
All ages -	39,558	59,966	602	725	1515·9	15·22	18·30

From this table it will be seen that among men under 20 years of age the ratio of admission was moderate, but that among men between 20 and 25 years of age it was very high, the ratio, 2110·8 per 1,000, showing more than two admissions per man during the year; in the next quinquennial period between 25 and 30 years, the ratio of prevalence is lower by nearly one fourth, and in the succeeding five years is further reduced by about the same amount; in both the remaining quinquennial periods the ratios are still lower. The mortality rates do not show so much difference according to periods of age, the ratios for men under 20 years of age and for men between 20 and 25 years of age differing only fractionally from each other; in the next two quinquennial periods the death ratios show a decline, but increase again in the ages 35 to 40 years, and 40 years and upwards. Invaliding, which in men under 20 years of age shows a very low ratio in the period between 20 and 25 years of age, gives a considerable ratio per 1,000, and increases steadily in frequency in the succeeding quinquennial periods of age.

TABLE showing the influence of Length of Service in the Country on the Sickness, Mortality, and Invaliding among the Troops in the Bengal Command, during the year 1886.

Years of Service in the Country.	Average Strength.	Admissions.	Deaths.	Invalidated.	Ratios per 1,000 of Strength.		
					Admissions.	Mortality.	Invaliding.
Under 1 year -	7,107	15,250	183	108	2145·8	25·75	15·20
From 1 to 2 years -	6,920	11,786	95	134	1703·2	13·73	19·36
„ 2 „ 3 „ -	5,230	9,033	80	78	1727·2	15·30	14·91
„ 3 „ 4 „ -	3,906	7,005	56	85	1793·4	14·34	21·76
„ 4 „ 5 „ -	3,235	5,441	47	63	1681·9	14·53	19·47
„ 5 „ 6 „ -	2,500	3,508	35	74	1403·2	14·00	29·60
„ 6 „ 7 „ -	1,946	2,855	39	51	1518·5	20·04	26·21
„ 7 „ 8 „ -	1,633	2,013	23	26	1232·7	14·09	15·92
„ 8 „ 9 „ -	1,041	1,033	14	21	992·3	13·45	20·17
„ 9 „ 10 „ -	840	530	8	18	690·5	9·52	21·43
„ 10 upwards -	1,306	1,290	22	67	987·7	16·84	51·39
Not stated -	3,894	72	—	—	18·5	—	—
Total service -	39,558	59,966	602	725	1515·9	15·22	18·30

The prevalence of sickness in the first year of service in the country is shown by the very high admission rate for that year in the above table, after which it decreased to some extent in the second year, and then did not differ much up to the fifth year; the admission ratio then begins to decline more rapidly, and continues to do so up to the tenth year of service, over which time there is a certain amount of increase. The mortality rate also is by far the highest for men in their first year of service, that for the second year being only about half of it. In the third year of service the death rate is a little higher, again falling in the fourth, after which it does not vary greatly until the ninth and tenth years, when it falls still further; there is one exception to this, the seventh year, in which the rate in the table is increased, but this is probably due to accidental circumstances. Over 10 years' service the death rate again shows some increase. Invaliding is low in the first year of service, increases in the second, after which considerable variations occur, but there appears to be a tendency to higher ratios of invaliding with greater length of service.

In neither of these tables can the ratios be said to be absolutely exact in relation to the total number of men serving in the Command, as in both cases there are a certain number of men concerning whom full particulars, either as to age or service, have not been furnished. These, however, would not probably make more than very slight differences in the ratios, which are therefore sufficient to give a good general idea of the influence of age and service on sickness and mortality, for which purpose they are put forward.

The admissions, deaths, and invaliding, &c. in the different groups and orders of diseases are shown in Abstract XIV., and the prevalence of sickness, mortality, &c. from the various orders of diseases in each of the military divisions of the Command are given in Abstract XVI. Owing to the changes in the arrangement of diseases in the revised nomenclature, it is not possible in many cases to compare groups and orders of diseases with similar ones in former years as has been done in previous reports, though, as far as this is practicable, it will be done.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In the 1st sub-group of these specific febrile diseases *eruptive fevers* show 328 admissions and one death; of these 19 were cases of *small-pox*, equal to a ratio of '5 per 1,000; in the previous year there were only 5 cases, or '2 per 1,000. The admission ratio, however, is only half the average ratio for the preceding five years; the death rate is also lower. Five of the cases, of which one was fatal, occurred at Peshawar, four at Fort Lahore, one at Amritsar, which is thought to have been contracted at the last-named station, three at Saugor, two at Mean Meer, and one case at Murree, Rawal Pindi, Sialkot, and Sipri respectively. The ratio of admission for *other eruptive fevers* was 7·8 per 1,000, which is lower than in the preceding year by 13·3, but is considerably above the average rate. As in the previous year, the majority of the admissions were due to dengue; indeed, out of the total number of admissions for these fevers all but 14 were cases of dengue. The stations with the greatest prevalence of the disease were Lucknow and Umballa, this was also the case in the preceding year. Of the cases at Lucknow, 157 in number, it is said that they occurred chiefly during the months of October and November; the disease was almost certainly contracted in the bazar in the first instance and then spread by contagion among the men. The cases were all of a mild type. Of the cases at Umballa it is stated that none occurred which could be considered as grave or dangerous, and the number admitted, 96, does not account for all those who were attacked, as many did not present themselves at hospital until the first brief stage had passed away, and a few days' light duty with simple treatment were enough to restore them to health. Among other stations affected with the disease were Dum Dum 29 cases, Jullundur 8, and Cawnpore 2, and others with single cases. Among the remaining admissions for eruptive fevers were five for measles and one for scarlet fever.

Enteric fever caused 820 admissions and 222 deaths (including that of an invalid), the ratios per 1,000 being 20·7 and 5·61 respectively. Compared with the results in the preceding year there is an increase of 6·9 in admission rate, and one of 1·56 in death rate, and compared with similar results for the previous five years the increase of admission rate equals 11·1, and that of mortality 2·53 per 1,000. The ratio of constant inefficiency, 2·65 per 1,000,

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is also increased in these comparisons by '88 and 1'44 respectively. The per-centage of mortality to cases treated was 27'1, which is lower by 2'1 than in the previous year. In Abstract XVII. there is a table taken from the report of the Principal Medical Officer, showing the stations at which the admissions and deaths from enteric fever took place, in each of the four quarters of the year. In this it will be observed that the disease, following the course of former years, showed the greatest prevalence in the second quarter, and the next in the third, in which also the mortality was highest. This year, therefore, shows that, as in the last and previous years, the greatest prevalence of enteric fever was in the hot and rainy seasons and the least in the cold season. The mortality to attack was highest in the third quarter, 35 per cent.; next in the last quarter, 33; then in the second, 22; and lowest in the first quarter, 19 per cent. The disease prevailed more or less in all the administrative divisions, and admissions are returned from 61 stations. Lucknow had the greatest number of admissions at any one station, 104 with 15 deaths. In the Principal Medical Officer's report it is stated with regard to Lucknow, that "the medical officer in charge of the station hospital attributes the great increase in this disease, which was nearly twice as prevalent as in the previous year, to two causes, first, to the large number of young soldiers who arrived in the preceding trooping season, and secondly, to the careful system of diagnosis adopted. With reference to the ages and periods of service in India at which the majority were attacked, he points out that of the 104 admissions 56 occurred in men between the ages of 19 and 22 years, and that 64 occurred in men with less than one year's service in the country. Although the greatest possible care was taken, the origin of the disease was not in a single instance satisfactorily accounted for. Surgeons-Major Cleghorn and Holmes, Indian Medical Service, medical officers of Lucknow, and excellent authorities on the subject, both hold the belief that enteric fever is very often present in the bazars in a mild form, chiefly as a disease of childhood. If such be the case there should be little difficulty in tracing to their true source, the constantly recurring outbreaks of the disease among young soldiers lately arrived from England. At Ranikhet there were 60 admissions with 5 deaths. Here there was a summer camp, to which 400 of the lately-arrived young soldiers were sent from the Lucknow and Rohilcund Commands, and from among these occurred 46 of the admissions and 4 of the deaths. At Dagshai, with an average strength of 810, there were 42 admissions with 11 deaths. The medical officer in charge in an interesting report states that no satisfactory reason can be assigned for the occurrence of the disease. The sanitation of the station was carefully attended to and the water supply was good. The admissions were most numerous in August, when all kinds of fever were most prevalent. The station was for weeks enveloped in mist, upon the clearing off of which there was a marked diminution in the number, and in the severity of fever cases, and even those under treatment showed a change for the better. Not one of the 52 prisoners in the military prison was admitted for fever at this time, and this is more to be wondered at, as they were for the most part young and recently-arrived soldiers, but a boy who had completed his imprisonment, and on discharge from gaol had been in barracks awaiting the arrival of an escort, was attacked with enteric fever. At Sialkot the disease appeared in an epidemic form and was of severe type; there were 67 admissions and 24 deaths; the greatest number of admissions occurred in the months of June and September. The disease could not be said to prevail in one part of the cantonment more than another, but the greatest number of admissions occurred in the 6th Dragoon Guards, and the highest comparative mortality in the military prison. The greatest prevalence of the disease took place in young men between the ages of 19 and 23, among whom were 45 admissions and 14 deaths. The source of the disease could be traced to no local cause, and the conclusion arrived at was that it was due to climatic effect on young and recently-arrived soldiers. At Jhansi 26 admissions and 14 deaths are recorded, but of these only 24 cases were contracted at the station, the other two being transferred from Fortress Gwalior on removal of the troops from that station. The medical officer in charge states that no case of enteric fever originated in Jhansi from 1883 to May 1886. One officer suffered from the

“disease in 1885, but he most probably contracted it elsewhere. Owing to Bengal.
 “the increase of the strength of the garrison but not of the accommodation,
 “there was at first over-crowding in two of the barrack rooms, which was
 “subsequently rectified. Possibly this over-crowding may have exercised
 “some influence on the production of the disease, but most probably the
 “chief cause was the effect of climate on young soldiers from England; 198
 “arrived in April; of these 14 were attacked and 9 died. At Rawal Pindi
 “there were 61 admissions with 11 deaths. This is much above the average of
 “former years, but the disease is stated to have been contracted elsewhere in
 “12 cases certainly, and 4 probably; 10 of these were supposed to have
 “originated at Deolali where the troops were detained a short time on their
 “journey up country. The predisposing cause of the disease is stated to be
 “youth and first arrival in the country. All efforts failed to trace the cases,
 “which undoubtedly rose in Rawal Pindi, to any specific origin. At Peshawar
 “there were 37 admissions with 16 deaths; the origin of the disease could
 “not be traced, but it is remarkable that all but two deaths occurred in men
 “who had served two years or less in the country, and 29 of the admissions
 “occurred in men whose ages were between 19 and 22 years. In the divisions
 “of Allahabad and Meerut the admission ratios were lower by 3·8 and 8 per
 “1,000 and the deaths by 3·27 and 1·10 respectively. In all the other
 “divisions the ratios were higher than in the preceding year.”

Other Continued Fevers.—Under this head are recorded 3,661 admissions for simple continued fever, and 3 deaths. The admission ratio, 92·5 per 1,000, differs from that in the preceding year by only 2·9, but both of these are below the average rate. The deaths occurred in Dagshai, Ferozepore, and Dinapore respectively. The greatest prevalence of simple continued fever was in the Peshawar circle, the ratio being 277·7 per 1,000; next in order was the Presidency with 227·0, followed by the Allahabad circle with 195·5; the least prevalence was in Rawal Pindi 31·5, then in Saugor 39·5, next above being Gwalior, 40·0, and the Meerut circle 46·1. Taking continued fevers together and comparing their prevalence in the different circles with corresponding results in the preceding year, it is observed that a considerable increase took place in the Presidency circle, equal to 106·7 per 1,000, and one of 93·4 in the Peshawar circle. In the Gwalior circle the ratio of prevalence declined by 75·2, in the Allahabad circle by 54·1, and in the Quetta circle by 11·5 per 1,000. In all the remaining circles an increase is observed, but only to a limited extent in any instance.

Cholera caused 36 admissions and 25 deaths, being in the ratios of ·9 and ·63 per 1,000, which are lower than the corresponding ratios in the preceding year by ·8 and ·42 respectively, and lower than the average ratios for the preceding five years by 1·4 and ·92 per 1,000. In Abstract XVIII. is a return taken from the report of the Principal Medical Officer showing the stations in the Command at which the admissions and deaths from cholera took place in each of the four quarters of the year. It will be observed from this that with but one exception all the cases were in the last half of the year, and these were divided into 19 cases with 13 deaths in the last quarter, and 16 cases with 12 deaths in the third quarter. The ratio of mortality to attacks was 69·4 per cent. as compared with 60·6 in the previous year. Only six of the districts were affected with the disease, and the number of stations attacked was 11. Dinapore was the station in which there was the greatest prevalence of the disease, the number of admissions being 12 and of deaths 7. The disease was prevalent, it is said, all over the district from May up to and including December, but did not appear among the troops until the end of August. At Shahjehanpur there were 8 cases, all but one fatal; a sharp outbreak occurred on the morning of the 3rd November and lasted until the 13th. The medical officer in charge states that a draft of the Scottish Rifles having arrived from Deolali on the 1st November led to the belief that the disease was imported as cholera was present in Deolali; however, it is also said there were cases of cholera in the district. Four cases, all fatal, occurred at Jhansi about the end of August and the beginning of September; the disease appeared suddenly, and there was no cholera in the surrounding district at the time. The type of the disease was severe. At Fort William and at Lucknow there were two cases each, both fatal; at Chunar there were two cases, one fatal; at Allahabad two cases, which recovered; at Cawnpore and

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Bareilly single cases, which proved fatal; and at Sialkot and Murree single cases, which recovered.

Dysentery caused 1,056 admissions and 35 deaths, being in the ratios of 26·7 and ·88 per 1,000 as compared with 24·6 and ·34 in the preceding year. Dysentery was prevalent chiefly in the Presidency and Allahabad divisions, Quetta being third in rate of prevalence. The ratio for the Presidency, 50·5 per 1,000, has increased by 19·7 as compared with the preceding year, and that for the Allahabad division 46·7 by 10·2; the Quetta ratio 32·9, has on the contrary, declined considerably from the last year's rate; the least prevalence of dysentery was in the Rawal Pindi circle, 18·1 per 1,000, Peshawar 19·1, and the Meerut circle 20·8, being just above. The death rate was highest in the Presidency circle, 5·43 per 1,000, and next in that of Allahabad, 1·62, and Quetta 1·61; in the Saugor and Peshawar circles the mortality from dysentery was nil. In Abstract XX. is a table taken from the report of the Principal Medical Officer, in which it is observed that the greatest prevalence of dysentery was in the third quarter of the year, the ratio of admission being 8·7 per 1,000, and the least was in the first quarter, 3·4; between these extremes were the second and fourth quarters with ratios of 7·6 and 7·2 per 1,000 respectively.

Nineteen admissions are shown for *other diseases* of this sub-group, they comprise two cases of epidemic diarrhoea, a few cases of mumps, and a few of influenza.

In the next sub-group of diseases *malarial fevers* show 15,095 admissions and 37 deaths, being in the ratios of 381·6 and ·93 per 1,000 respectively; the number of men constantly sick was 10·50. Compared with corresponding ratios in the preceding year a decline of 128·3 per 1,000 has taken place in the admission ratio, and one of 3·25 in that of constant inefficiency on this account, but there is an increase of mortality equal to ·39. Very similar differences exist if these ratios be compared with those of the average of the preceding five years, there being a decrease of 125·8 and 3·28 per 1,000 respectively in the ratios of admission and constantly sick, and an increase of ·33 in the mortality rate. The ratios of prevalence of malarial fevers varied considerably in the different districts, the highest being in the Quetta district, and as much as 1282·1 per 1,000; between this and the next highest admission rate there is a considerable difference as the ratio for the Meerut circle is 666·0; other circles, with comparatively high ratios of prevalence are Lahore and Saugor, 584·2 and 525·6 respectively. The circle which shows the least prevalence of malarial fever is Oudh, the ratio being only 110·6, the next above being Peshawar with 194·4, and then Lahore with 226·1. Compared with last year's return it is seen that the ratios of prevalence have increased in four circles and decreased in the remainder. Among the instances of increase Saugor shows one of 159·0, and Allahabad one of 157·7 per 1,000; and among instances of decrease the most marked were Meerut 597·3, Lahore 507·4, and Peshawar 233·7 per 1,000. The mortality from these fevers in the different circles varied from 3·78 per 1,000 in that of Quetta to nil in Rohilcund and Gwalior. Other high ratios were 1·52 in Sirhind, 1·47 in Peshawar, and 1·22 in Allahabad. With regard to the very high mortality ratio at Quetta, it may be mentioned that it compares favorably with that in the preceding year, having declined by ·54, though the admission ratio has increased by 104·2 per 1,000. Out of the total number of admissions for malarial fevers 428, with 30 deaths, are returned as remittent fever, 47, with one death, as malarial cachexia, and the remainder, with 6 deaths, as ague. The deaths from remittent fever occurred as follows: 7 at Jullundur, 7 at Quetta or adjacent camps, 4 at Nowshera, 3 at Mean Meer, and the remaining 9, as well as the deaths from ague, were single cases at separate stations. The death reported from malarial cachexia occurred at Fort William.

In the sub-group of *septic diseases* 46 admissions and 4 deaths are recorded, equal to 1·2 and ·10 per 1,000. The cases were 44 of erysipelas, and 2 of pyæmia; of the former two were fatal, one at Allahabad and the other at Murree, and of the latter both were fatal, occurring at Dalhousie and Peshawar respectively. These affections were less prevalent than in the preceding year, when the ratio was equal to 1·6 per 1,000.

The succeeding sub-group comprises venereal affections, and it is observed that the admissions for *primary syphilis* numbered 4,808, equal to a ratio of 121·5 per 1,000. The ratio of admission for primary syphilis recorded in the

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previous year was 129·3 per 1,000, and there would consequently appear to have been a decline in prevalence, but this is not the case owing to simple venereal ulcers, formerly recorded under this head, being, according to the method of registration in the new nomenclature of diseases, returned under diseases of the generative system. If, therefore, to render the ratios of the two years fairly comparable the admissions for simple venereal ulcer be added to those of primary syphilis, a ratio of admission is obtained equal to 168·0 per 1,000, which shows an increase on last year's return of 38·7 per 1,000, and on the average ratio for the preceding five years one of 71·4. The number constantly sick from primary venereal sores was equal to 11·71 per 1,000, which is higher than the ratio in the preceding year by 3·04, and than the quinquennial average ratio by 4·85 per 1,000. The admissions for *secondary syphilis* were 1,309 in number, and there were 7 deaths, including that of an invalid; the ratio of admission was equal to 33·1 per 1,000, which is higher than in the previous year by 2·5 and than the five years' average by 8·8; the ratio of constant inefficiency was 2·80 per 1,000, being above the rate in the preceding year by ·19 and above the average rate by ·70. *Gonorrhœa* caused 6,085 admissions or 153·8 per 1,000, and the ratio of constantly sick from this affection was 10·16. Compared with corresponding ratios in the previous year there is a decline of 16·9 in the former, and one of 1·34 in the latter, while compared with quinquennial average ratios, the former is increased by 14·7 and the latter by ·99 per 1,000.

Including all forms of venereal affections the total admission rate equals 354·9 per 1,000; this is higher than in the previous year by 24·3, and than the average rate of five years by 94·9. The ratio of constant inefficiency from these diseases equals 24·67 per 1,000, and is higher than in 1885 by 1·89, and than the average rate by 6·54.

With regard to the prevalence of venereal disease in the different districts it is observed from Abstract XVI. that primary syphilis, exclusive of simple venereal ulcers, gave the highest ratio of admission in the Rawal Pindi district, 179·9 per 1,000, the next being 152·5 in the Meerut district followed by 146·7 in the Peshawar circle; the lowest ratio was 24·8 in the Quetta circle, the next above being 41·1 in Gwalior. Secondary syphilis varied from 47·9 in the Rawal Pindi circle to 7·3 in Gwalior, the average ratio being 33·1. *Gonorrhœa* was most prevalent in the Allahabad circle, the ratio being 241·4 per 1,000, the next being 225·4 in the Presidency circle, and the third, 200·5, in Rohilcund; the lowest ratio was 32·9 in Quetta, the next above being 103·9 in Sirhind, and 125·9 in the Meerut circle. The highest ratio of prevalence of all venereal affections was 395·5 per 1,000 in Rawal Pindi, the next 364·9 in Allahabad, and the third 351·4 in the Presidency; the least prevalence, 81·4 per 1,000, occurred in Quetta, Gwalior coming next above with 198·5, and then Sirhind with 244·7 per 1,000.

The 5th sub-group of specific febrile diseases, those communicable from animals to man, is represented by one case of hydrophobia, which proved fatal. The case occurred at Meerut, and was a typical one. The man was bitten by a dog six weeks previous to attack; the wound was immediately cauterised but on the 5th July the symptoms commenced and he was admitted to hospital, where he died 48 hours afterwards.

In Group B. *parasitic diseases* caused 181 admissions, equal to 4·6 per 1,000; 148 of the admissions were for *tænia solium*, and 28 for *tænia medio-cancellata*. *Scurvy* caused 146 admissions, being in the ratio of 3·7 per 1,000, which is higher than that in the previous year, and is also above the average rate. The highest ratios of admissions were in the Quetta circle, 12·4, where the scarcity of vegetables is much felt, and in the Meerut circle, 12·2. At Roorkee it is said scurvy presented itself in a mild form among a few of the more recent arrivals from home, and at Chakrata there was an outbreak of this disease causing 56 admissions. The medical officer in charge reports that "the cause of the outbreak is not very clear. The men had good " fresh meat, bread, 12 ozs. of fresh potatoes, and 4 ozs. onions daily, and " they were in robust health. The dampness and depressing effects of the " rainy season with very little amusement and no occupation may have some- " thing to say to it as the outbreak did not begin until the rains were well " established, and on their cessation the curative effect of the dry, bracing air, " was simply marvellous."

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The number of admissions due to the abuse of *alcohol* was 643, and there were 8 deaths; the ratio of admission was 16·3, and that of mortality ·20 per 1,000. The former exceeds that in the previous year by 7·0, and is considerably above the average of former years; the cases are returned as alcoholism 604 with 6 deaths, and delirium tremens 39 with 2 deaths. The highest ratio of admission due to the abuse of alcohol in any circle was 37·0 per 1,000 in that of Allahabad, being followed by that of Saugor with 35·5; the circles showing least prevalence are Peshawar and Gwalior, the rate in each case being 7·3.

Under the group of developmental diseases are shown 3 admissions for knock knee and 881 for debility, being in the ratio of 22·3 per 1,000, which is higher than the corresponding ratio in the preceding year by 9·7. One death is recorded as due to debility. The admission ratios in the different districts vary from 34·0 per 1,000 in the Lahore circle and 29·0 in the Peshawar to 13·7 in the Rawal Pindi circle, and 8·1 in the Saugor circle.

In Group D., general diseases not classified, *rheumatism* caused 1,370 admissions and 4 deaths, the ratio of admissions was 34·6 per 1,000, fractionally below the corresponding rate in the previous year, and rather below the average rate. Of the total number of admissions 68 were cases of rheumatic fever, 4 of which proved fatal. The greatest prevalence of rheumatic affections among the different districts is observed to have been in the Sirhind circle, the ratio being 60·0 per 1,000, in the Lahore circle, the rate being 49·6, and in the Oudh circle, the rate being 40·6; the least prevalence was in the Saugor division, 19·2, the Presidency division, 20·0, and the Allahabad division, 26·8. Compared with the results in the preceding year an increase of 19·7 per 1,000 has taken place in the prevalence of rheumatism in the Sirhind circle, one of 11·2 in the Lahore circle, and one of 10·9 in Oudh; a decrease of 21·9 per 1,000 has taken place in the ratio for the Peshawar circle, and one of 12·3 in the Presidency. In the remaining circles no great difference is observed.

Tubercular Diseases caused 158 admissions and 43 deaths, including those of 11 invalids, being in the ratios of 4·0 and 1·09 respectively as compared with 6·0 and 1·14 in the previous year, which are also below the average. It must be remembered, however, that this decline is probably in some measure due to the changes in the nomenclature of diseases; many cases of phthisis pulmonalis which were formerly returned under this head are now returned as pneumonic phthisis under diseases of the respiratory system. The greatest prevalence of tubercular diseases among the districts was 6·8 per 1,000 in the Lahore circle and 6·7 in Oudh; in Gwalior there was no occurrence of these diseases, and in the Quetta circle the admission ratio was only 1·1. Of the total number of admissions 100 are returned as tubercular disease of the lungs, and of the total number of deaths 36 were due to this cause.

Other diseases of this group caused 489 admissions and 5 deaths, being in the ratios of 12·4 and ·13 per 1,000. The cases comprised 265 of non-malignant new growth (of which 223 were simple papilloma), 6 malignant disease, 216 anæmia, and 2 diabetes. The deaths were all due to cancer.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 498 admissions and 13 deaths, including those of two invalids, being equal to ratios of 12·6 and ·33 per 1,000 respectively. Compared with similar results in the preceding year a decline of 3·3 is observed in the admission rate, and one of ·84 in the death rate, and both these ratios are below the corresponding average ratios for the previous five years. It must be recollected, however, that certain diseases, such as sunstroke and hydrophobia, are not now included in nervous diseases, and this will make some slight difference. The greatest prevalence of nervous diseases in any one district was 23·5 per 1,000 in that of Allahabad, next 17·7 in that of Lahore, and 17·5 in Oudh; the least prevalence amounted to 5·9 in Rohilcund, 8·2 in the Saugor circle, 8·4 in the Peshawar circle, and 8·5 in that of Gwalior. Compared with corresponding results for the preceding year an increase of 6·6 per 1,000 has occurred in the ratio for the Allahabad circle, one of 1·7 in that of Oudh, and one of ·5 in that of Saugor. In all the other districts a decline has occurred, being equal to 9·4 in Rohilcund, 9·1 in the Rawal Pindi circle, and 6·6 in Gwalior; in the remainder the decrease is not so marked. The highest mortality ratio was ·57 per 1,000 in the Rawal Pindi circle, the next ·43 in Sirhind, and ·42 in the Presidency;

in four districts there was no mortality. Of the admissions 58 were due to mental disease, equal to a ratio of 1·5 per 1,000; among the remainder there were 303 due to some form of neuralgia, 57 to epilepsy, 30 to paralysis, &c. The deaths were returned as follows:—Five from meningitis, one from hæmorrhage of the pia mater and arachnoid, two from softening of the brain, two from apoplexy, two from paralysis, and one from spinal meningitis.

Diseases of the Eye caused 555 admissions, equal to a ratio of 14·0 per 1,000, which is fractionally below the corresponding rate in the previous year, and also below the average. The prevalence of ophthalmic affections varied considerably in the different districts, the greatest being in the Sirhind district, and equal to 22·7 per 1,000, and the least 4·9 in the Quetta district. The admission ratios in the Presidency and in Gwalior were also high, 19·6 and 19·4 respectively. Out of the total number of admissions 390 were due to conjunctivitis.

Diseases of other Organs of Special Sense, with admissions numbering 549, were in a rate of prevalence of 13·9 per 1,000, which is below that in the previous year by 2·1, but just about the average ratio. They were most prevalent in the Gwalior circle, 38·7 per 1,000, and least so in the Quetta circle, 4·3. 515 of the admissions were for aural diseases, about four fifths of which were cases of inflammation of the external meatus. There were also 34 admissions for nasal affections, 21 being cases of epistaxis.

Diseases of the Circulatory System caused 518 admissions and 19 deaths, inclusive of two invalids. The admission ratio, 13·1, and the death ratio, ·48, are slightly below the corresponding ratios in the previous year, and also below the average ratios. The highest rates of prevalence in the different districts were 27·8 per 1,000 in Gwalior, 22·4 in Oudh, 21·0 in the Rawal Pindi circle, 14·2 in the Meerut circle, and 13·6 in Rohilcund; in all the other circles the ratio was below the average for the whole command, and the lowest ratio was found, as in former years, in the Presidency district; in Quetta also the ratio was low, 6·5 per 1,000. The highest rates of mortality were 1·16 in Saugor and 1·08 in Quetta; in five divisions there was no mortality, and in the remainder the death rates were fractional. Compared with the preceding year the admission rate for Gwalior increased by 15·2, and to a less extent in Oudh, Rawal Pindi, Saugor, Peshawar, and Allahabad; in the remainder a decrease is observed, 8·5, in Sirhind, being the most marked. The principal causes of admission were palpitation 355 cases, valvular disease of the heart 86, varix 40, aneurysm 5, &c. The causes of death were valvular disease of the heart 4 cases, fatty degeneration of the heart 4, aneurysm 3, pericarditis 2, dilatation of the heart 2, and rupture of artery one case.

Diseases of the Respiratory System were the cause of 1,386 admissions and 37 deaths, of which 3 occurred in invalids who had left the Command. The ratio of admission, 35·0 per 1,000, is lower than that recorded in the preceding year, and is below the average rate. The mortality ratio, ·93, is above the previous year's rate, but is about the average. Among the different districts the highest ratio of prevalence is found in Gwalior, 88·4 per 1,000, the next in order being 49·1 in the Allahabad circle, and 44·4 in the Peshawar circle. The lowest ratio of prevalence was in Rohilcund, 29·2 per 1,000, Sirhind being next above, 29·9, followed by the Rawal Pindi circle with 30·9. Compared with the return for the preceding year, an increase of 43·1 has occurred in the ratio of prevalence in Gwalior and one of 16·2 in that of Quetta. In the Presidency, Allahabad, and Rohilcund the ratios show an increase, but in the remaining circles a decrease, the most marked being 16·9 in the Meerut circle. Mortality was highest in Gwalior, 2·42 per 1,000, then in Saugor 2·33, and Peshawar 1·83. In the Presidency and Rawal Pindi circles there was no mortality, and in Oudh it was at the rate of ·30 per 1,000. Of the total number of admissions, 1,066 were cases of bronchial affection, 128 pneumonia, 74 pleurisy, 25 acute and 22 chronic pneumonic phthisis. The causes of death were pneumonia 24 cases, pneumonic phthisis 8, pulmonary apoplexy 2, abscess of the lung 2, and embolism 1 case.

Diseases of the Digestive System caused 6,691 admissions and 63 deaths, including two of invalids, being in the ratios of 169·1 and 1·59 per 1,000 respectively. The ratios in the preceding year for diseases of the digestive system, exclusive of dysentery, was 193·7 and 1·63 per 1,000. Those for the year under report, therefore, compare favorably with these, showing a decrease

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of 24·6 in admission rate and a fractional decrease in mortality: they also compare favorably with the corresponding average ratios for the preceding five years.

With regard to the prevalence of these diseases in the different administrative districts it is observed that the highest ratio of admission was 271·4 per 1,000 in the Allahabad circle, the next, 236·1, in Gwalior, and the third, 197·7, in the Saugor circle: the lowest ratio was 150·6 in Oudh, the next above being 159·1 in Rawal Pindi and 165·1 in the Meerut circle. Mortality was highest in the Allahabad circle, 3·25 per 1,000, the next ratio being 2·38 in Sirhind, and the third 2·08 in Rohilcund; the lowest death rate was ·30 in the Lahore circle, then ·77 in the Rawal Pindi circle, and 1·10 in that of Peshawar. Comparing the ratios of sickness and mortality with corresponding results in the preceding year, it is observed that there is an increase of 48·4 per 1,000 in the ratio of prevalence in the Allahabad division, one of 48·2 in the Presidency, and one of 6·7 in the Lahore division. In all the remaining divisions a decrease has occurred, varying from 69·1 in the Rohilcund division to 7·8 in the Rawal Pindi division. Mortality increased in the Presidency, Allahabad, Sirhind and Quetta circles, but decreased in the remainder, the greatest increase being 1·63 per 1,000 in the Allahabad division, and the greatest decrease ·97 in Oudh. The principal causes of admission were diarrhoea 2,218 cases, dyspepsia 1,202, hepatic affections 1,012, affections of the throat 1,060, hæmorrhoids 292, &c. The causes of death were abscess of the liver 49 cases, cirrhosis of the liver 2 cases, peritonitis 5 cases, and ulceration of the stomach, enteritis, perforation of intestines, intestinal obstruction, hepatitis, peri-hepatitis, and jaundice one case respectively.

In Abstract XIX. there is a table taken from the report of the Principal Medical Officer showing the prevalence of dysentery, diarrhoea, and hepatitis in each of the divisions of the Command and the deaths caused thereby; and in Abstract XX. is a table showing the prevalence of, and mortality from, these diseases in each quarter of the year.

The sickness and mortality from dysentery has already been considered, but diarrhoea alone caused an admission ratio, for the whole command, of 56·1 per 1,000, which is identical with the corresponding rate recorded in the previous year. In the year under report there was no mortality from diarrhoea, and but one death occurred in the previous year. With regard to seasonal prevalence it is observed that as in the previous year the highest admission ratio was in the third quarter of the year, 19·6 per 1,000, followed by the second, 16·7, and the fourth 12·5; the lowest ratio, 9·0, being in the first quarter. Diarrhoea was most prevalent in the Gwalior circle, the admission ratio being 105·3 per 1,000; in Allahabad also there was a high ratio, 102·4; in Oudh and Rohilcund the lowest ratios are found, 35·4 and 45·5 respectively. Diarrhoea was more prevalent in the Presidency, Allahabad, and Rawal Pindi circles; and less so in the Quetta, Peshawar, and Rohilcund circles. In the remaining divisions there was not much difference as compared with the preceding year. Hepatitis, including liver abscess, caused an admission rate of 20·2, and a death rate of 1·29 per 1,000, the corresponding figures recorded in the preceding year being 20·7 and ·88. The greatest prevalence of hepatic affections was in the third quarter of the year, being equal to 7·0 per 1,000, next in the fourth quarter, 5·7, then the second, 4·3, and least in the first, 3·9; mortality was greatest in the last quarter, ·52 per 1,000, next in the third quarter, ·30, and then equal in the first and second quarters; 25 per 1,000. The highest admission ratio for these diseases in any circle was 47·1 in that of Allahabad, the next 30·3 in Oudh, and the third, 27·2, in the Lahore circle; the lowest ratio was in the Quetta circle, only 4·3, the circles of Rawal Pindi and Peshawar showing the next higher ratios, 13·2 and 16·1 per 1,000 respectively. Mortality was highest in the Allahabad division with a ratio of 2·85 per 1,000, Sirhind being next in order with 2·38, and the Presidency with 1·67; the lowest ratios were in the Lahore, Rawal Pindi, and Peshawar circles, ·30, ·57, and ·73 per 1,000 respectively. Compared with corresponding ratios in the preceding year, increase of prevalence of hepatic affections has occurred in the Allahabad, Lahore, Oudh, Presidency, and Saugor circles, varying from 18·4 in the first to 2·3 in the last named; in the remaining circles decrease has occurred though not to any great extent. Mortality increased in six of the administrative

circles, notably in those of Allahabad and Sirhind, but declined in the *Bengal* remainder.

Diseases of the Lymphatic and Glandular Systems.—Under this head 853 admissions are recorded, the ratio per 1,000 being 21·6, which is higher than the ratio with which it corresponds in the previous year by 5·4, and is above the average. It must be remembered, however, that this is the first year in which diseases of the spleen have been included in this order, and the increase is in some measure due to this. The admission ratios in the different districts varied from 32·0 per 1,000 in the Saugor circle and 31·2 in that of Peshawar to 8·6 and 9·0 in the Quetta and Rohilcund districts respectively, and with the exception of the last two named, in which a decline is observed, an increase has occurred in all as compared with the preceding year. Of the admissions 112 were for splenic affections, and most of the remainder were for inflammation of the inguinal glands. One case of gôitre and one of Addison's disease are returned.

Diseases of the Urinary System caused 94 admissions and 5 deaths, being in the ratios of 2·4 and ·13 per 1,000. The recent alterations in registration of disease according to the new nomenclature have reduced the number of diseases returned under this head to such an extent that these ratios are not at all comparable with those of preceding years. Of the admissions 35 were for renal affections, 15 for cystitis, and 29 for incontinence of urine; and of the deaths, three were caused by Bright's disease, one by pyelitis and one by cystitis.

Diseases of the Generative System with 2,632 admissions, caused a ratio of 66·5 per 1,000, a great increase on the ratio recorded under this head in the previous year, which is, of course, due to the registration of cases of simple venereal ulcer under this group according to the recent regulations. These cases have been previously alluded to while speaking of venereal affections. The other diseases which contributed chiefly to the admission ratio were orchitis 341 cases, balanitis 222, stricture of the urethra 124 cases, &c.

Diseases of the Organs of Locomotion caused 259 admissions and 3 deaths, being in the ratios of 6·5 and ·08 per 1,000. The admission ratio is fractionally above that in the preceding year and above the average rate. Out of the total number of admissions 167 were cases of synovitis, the remainder being for various affections. The deaths are recorded as caries of the lumbar vertebrae, necrosis, and synovitis one case respectively.

Diseases of the Connective Tissue, with 867 admissions, caused a ratio of 21·9 per 1,000, being rather higher than the similar ratio in the previous year, as well as above the average.

Diseases of the Skin caused 3,017 admissions, equal to a ratio of 76·3 per 1,000, which is somewhat below the corresponding rate in the previous year, and also below the average. The prevalence of skin affections varied from 126·8 per 1,000 in the Allahabad circle, and 103·1 in the Presidency, to 26·4 in the Quetta circle and 57·6 in the Saugor circle. Compared with the previous year an increase of 23·1 has occurred in the ratio for the Presidency, and one of 14·0 in that for Allahabad; and in the Saugor and Gwalior circles the rates have declined by 44·2 and 38·1 per 1,000; in the remaining circles the differences are not greatly marked. More than half the admissions were due to ulcers and boils, and of the remainder the majority were due to whitlow, eczema, ringworm, itch, herpes, &c.

Poisons.—There were 10 admissions and 2 deaths, being in the ratios of ·3 and ·05 per 1,000. The causes of admission were as follows:—One case of copper poisoning due to drinking milk which had been boiled in a badly tinned vessel, producing symptoms somewhat similar to cholera; the man recovered. Two cases of poisoning by oxalic acid, one accidental; a man having drank by mistake a mixture of this poison made for cleaning purposes; the other was an attempt at suicide. One case of poisoning by cyanide of potassium; this also was suicidal and occurred at Quetta, and ended fatally. There were four admissions for poisoning by alcohol, one of which proved fatal; also one admission for snake bite, one for sting by a scorpion, and one for stings by insects.

Injuries.—The admission ratio for injuries was equal to 121·1 per 1,000, and the death rate to 2·19 as compared with 130·6 and 1·36 respectively in

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the preceding year. General injuries caused 161 admissions and 50 deaths, 28 in and 22 out of hospital. The admissions comprised burns and scalds 3 cases, effects of excessive exertion one case, lightning stroke 5 cases, sunstroke 82, heat apoplexy 63, multiple injury 3, and exhaustion 4 cases. The deaths were as follows: One from burns and scalds, 9 from sunstroke, 22 from heat apoplexy, 14 from asphyxia by drowning, 2 from multiple injury, and 2 from lightning stroke. Of the cases of drowning 13 were accidental, and one was suicidal, a man having jumped into a well while in a state of unsound mind. The cases of multiple injury resulted one from a fall from an upper verandah, and the other from a fall from a horse. The deaths from lightning stroke occurred in the swimming bath at Sialkot, where the men were bathing; the building was struck, and they were killed instantaneously; five other men were in the water at the time, two of whom were affected, but ultimately recovered.

The admissions for local injury were 4,628 in number and there were 37 deaths. Among the admissions were 35 for gunshot wound, 166 for fractures, 46 for dislocation, 1,071 for sprains, 1,726 for contusions, and 1,191 for wounds. The deaths were due to the following causes: Wound of throat, self-inflicted, 1; gunshot wounds, 19, of which 4 were accidental, 3 homicidal, and 12 suicidal; fracture of vault of skull, 4; fracture of base of skull, 3; other fractures, 2; dislocation of spine, 1; rupture of bladder, 2; laceration of urethra, 1; rupture of viscera, 2; and compression of brain, 2.

In all there were 15 suicides, 12 from gunshot, and one from cut-throat, poison, and drowning respectively. In seven of them no motive could be assigned, in four drink was more or less the cause, and for the remaining four the causes were believed to have been mental disease, difficulties due to neglect of duty, depression at being reprimanded, and bad news respectively. In 11 cases a verdict of temporary insanity was returned, in two a verdict of suicide, and in two there was no inquest. In two regiments there were two suicides each, but the remaining suicides were single cases in 11 different corps. There were also three attempts at suicide, two by gunshot and one by poison; they were all more or less due to the effects of drink.

The cases of homicide were as follows: At Ranikhet a sergent, Leinster Regiment, was shot by a private of the same corps; at Subathu a private, Royal Irish Regiment, was shot by a comrade; and at Peshawar, a private of the Wiltshire Regiment was shot by a Pathan robber.

Among the surgical operations recorded may be mentioned the following: An amputation of the forearm on account of gunshot, with successful result; also several minor amputations. Extraction of shot from the face in a case of gunshot wound. Ligature of the temporal artery on account of traumatic aneurysm; this case, however, proved fatal. Ligature of left radial and two branches of right ulnar arteries, on account of injuries received by a man who, when drunk, dashed his hands through a window. Removal of tumours in 16 instances, viz., fibroma 4 cases, lipoma 2, chondroma 3, wen 6, and adenoma of breast 1 case. Partial excision of lower jaw on account of caries, with fatal result. Abscess of liver was tapped in 9 instances by the aspirator, resulting in 1 recovery and 8 deaths, and in 6 instances by trocar and canula, resulting in 2 recoveries and 4 deaths. Two cases of paracentesis abdominis on account of ascites, due in one case to cirrhosis of the liver, and in the other to valvular disease of the heart; both ended fatally. Tapping the bladder above the pubes on account of laceration of urethra in conjunction with fracture of the pelvis, but the case terminated fatally. In addition to the above there were operations for paracentesis thoracis, prolapse of rectum, fistula in ano, urethral stricture, hydrocele, and several others of minor character. With the exception of those above mentioned as having terminated fatally, all the operations are stated to have been successful.

Invaliding.—The number of men sent home as invalids during the year was 724, being at the rate of 18.30 per 1,000, which has declined from the corresponding rate in the preceding year by 2.04, and is below the average rate for the preceding 10 years by 15.87. In Abstract XLIII. will be seen the ratios of invaliding according to the different arms of the service; thus, invaliding in the cavalry was at the rate of 22.36 per 1,000 as compared with 27.54 in the previous year; in the artillery the invaliding rate was 23.29, and has declined by 7.32 from the previous year's rate; and in the infantry the

rate, 16·20, shows a decline of ·18. Taking particular corps in each arm of the service the highest invaliding rate in the cavalry was 44·78 per 1,000 in the 8th Hussars at Meerut, this regiment had the highest rate also in the previous year; and the lowest rate was 4·85 in the 2nd Dragoon Guards at Umballa. In the artillery the highest invaliding rate in any one battery was 89·11 per 1,000 in the 5th Battery, 1st Brigade, Welsh Division, quartered at Fort Allahabad; the rates vary greatly in different batteries, and in several there was no invaliding. In the infantry the 1st Battalion King's Own Borderers had a high rate of invaliding, 53·96 per 1,000; this regiment was quartered the greater part of the year at Meerut; the rates of invaliding differ greatly in different regiments, and were as low as 2·12, 2·44, and 1·23 in the 2nd Highland Light Infantry, 2nd Royal Sussex, and 1st Loyal North Lancashire Regiments respectively, the first chiefly at Umballa and Dagshai, the second at Rawal Pindi, and the last at Quetta.

With regard to the influence of age and of residence in the country on invaliding it will be observed, if reference be made to the tables given above, that among men under 20 years of age the invaliding ratio is very low, only 4·45 per 1,000; between 20 and 25 years of age it rises to 18·23, and steadily increases beyond that age, being 21·04 between 25 and 30 years, 23·30 between 30 and 35 years, then 35·99 between 35 and 40 years, and 63·49 from 40 years upwards. As to length of service in the Command the invaliding rate in the first year's service was 15·20 per 1,000, increased in the second year's service to 19·36, dropped in the third year to 14·91 and rose in the fourth to 21·76. The year of service in which the rate of invaliding was highest, except for service over 10 years taken together, was the sixth year, in which the ratio reached 29·60 per 1,000. The principal causes of invaliding were dysentery 35 cases, or ·88 per 1,000; malarial fevers 32, or ·81 per 1,000; secondary syphilis 44, or 1·11; debility 58 cases, or 1·46 per 1,000; tubercular diseases 61 cases, or 1·54 per 1,000; rheumatic affections 33 cases, or ·83 per 1,000; diseases of the nervous system 76 cases, or 1·92 per 1,000, ·76 being for mental affections; diseases of the circulatory system 115 cases, or 2·91 per 1,000; diseases of the respiratory system 36 cases, or ·91 per 1,000; diseases of the digestive system 71, or 1·79 per 1,000; and injuries 32 cases, or ·81 per 1,000. Compared with corresponding results in the preceding year it will be seen that, generally speaking, the invaliding ratios show some decrease; there are, however, a few exceptions, among which may be mentioned dysentery, the invaliding ratio for which disease increased from ·48 to ·88 per 1,000, and secondary syphilis, which increased from ·74 to 1·11 per 1,000.

The number of men finally discharged as medically unfit for further service was 373, which is equal to a ratio of 9·43 per 1,000 of the strength. This ratio is lower than the corresponding rate in the previous year by 4·33 and than the average rate for the preceding decennial period by 7·91 per 1,000. The chief disabilities which necessitated final discharge were diseases of the nervous system 65 cases, or at the rate of 1·64 per 1,000, (of these, the greater part, 44, were cases of mental disease); diseases of the circulatory system 62 cases, or 1·57 per 1,000; debility 47 cases, or 1·19 per 1,000; tubercular diseases 46 cases, or 1·16 per 1,000; diseases of organs of special senses 35 cases, or ·88 per 1,000; diseases of the respiratory organs 21 cases, or ·53 per 1,000; diseases of the digestive system 18 cases, or ·45 per 1,000; diseases of the organs of locomotion 17 cases, or ·42 per 1,000; and injuries 15 cases, or ·38 per 1,000. Compared with corresponding ratios in the preceding year the ratios of final discharge by invaliding have decreased in most of the different orders of diseases; but in one or two of the minor ones, such as diseases of the lymphatic system, and diseases of the cutaneous system a slight increase is observed.

In Abstract XXI. is a table taken from the report of the Principal Medical Officer, showing the comparative mortality and invaliding in the different grades of commissioned officers, non-commissioned officers and men, during the year 1886, and for the 10 preceding years. It will be observed that the ratio of mortality for commissioned officers was 21·02, and that of privates 20·72 per 1,000, and that these are higher than the corresponding ratios of the decennial average by 1·31 and 2·13 respectively, but the ratio for non-commissioned officers, 15·82, has declined by 5·78. If these ratios be compared with those of the previous year there is an increase of 9·75 in that for officers,

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and one of 6·37 for privates; but a decrease of 2·65 in the rate for non-commissioned officers. With regard to invaliding in the three grades the ratio for officers was 54·29 per 1,000, an increase of 3·83 on the decennial average, and of 3·99 on the last year's rate. The rates of invaliding for non-commissioned officers and privates were 14·03 and 18·25 per 1,000 respectively, the former being lower by 23·02 than the average, and by 4·20 than in the previous year, and the latter also lower in both these comparisons by 18·01 and 1·47 respectively.

In Abstract XLVI. will be found a return furnished by the Principal Medical Officer to the Government of India showing the comparative sickness, mortality, and invaliding of men who extended their service in India and those who had not, in the Presidency for the year 1886. From this it will be seen that the proportion of sickness, mortality, and invaliding among those who were completing their extended Indian service is far less than that of the men of shorter service who were serving under the ordinary conditions.

Officers.—In the annual return of the Principal Medical Officer the average strength of officers is given as 1,148, the attacks of illness 791, the deaths 30, and the number invalided 39. The rate of prevalence of sickness was, therefore, 689·0 per 1,000, that of mortality 26·13, and that of invaliding 33·97. Compared with corresponding ratios in the preceding year there is a decrease of 61·6 in the ratio of prevalence of sickness, and a slight decrease in the invaliding rate, but the mortality rate is increased by 10·34. Among the illnesses were the following cases of eruptive fevers: One of small-pox, two of measles, and six of dengue. Enteric fever caused 31 attacks and 8 deaths, being in the ratios of 27·0 and 6·96 per 1,000 respectively; the corresponding ratios among non-commissioned officers and men being 20·7 and 5·61 per 1,000. Compared with the rates of prevalence and mortality among officers in the preceding year there is an increase on the former of 6·3, and on the latter one of 3·64 per 1,000. The mortality of enteric fever to attacks was equal to 25·8 per cent. Simple continued fever showed 113 attacks and dysentery 30. Malarial fevers caused 191 illnesses and 5 deaths; of these 27 cases with 3 deaths were remittent fever. In addition to the above the principal causes of illness were diarrhoea, 42 cases, hepatic affections 19, and local injuries 130 cases. Besides those already mentioned the following deaths are recorded, hepatic diseases 2, concussion of the brain 3, fracture of the base of the skull 2, and cancer, pleurisy, sunstroke, Bright's disease, and poisoning from the effects of accidental inhalation of ammonia, one case respectively. In addition to these there are recorded five deaths, from various causes, of officers absent from their corps in England. The causes of invaliding were enteric fever 1 case, dysentery 5 cases, malarial fevers 8, secondary syphilis 1, debility 6, rheumatic affections 2, fibroma 1, tubercular diseases of the lungs 1, nervous diseases 3, keratitis 1, bronchitis 1, hepatitis 4, urinary affections 1, chronic synovitis 1, concussion of the brain 2, and dog bite 1 case.

Women.—The average strength of women was 1,920, and there were 1,374 admissions into hospital and 34 deaths, being in the ratios of 715·6 and 17·71 per 1,000 respectively. Compared with the return for the preceding year there is a decline of 51·0 in the admission rate, but there is an increase of 4·42 in the rate of mortality. Among eruptive fevers small-pox caused 4 admissions, measles 1, and dengue 3. Enteric fever was the cause of 17 admissions, and 8 cases proved fatal, being in the ratios of 8·8 and 4·16 as compared with 5·3 and 1·59 in the previous year, and with 20·7 and 5·61, the ratios among men, respectively. The per-centage of mortality to attack was 47. Simple continued fever caused 73 admissions, about the same as in the previous year. There were 21 cases of dysentery with one death, and two cases of cholera are recorded, one of which was fatal. Malarial fevers caused 247 admissions, equal to a ratio of 128·6 per 1,000, which is lower than in the previous year by 70·1, and considerably below the ratio among men. Among the cases treated were 13 of remittent fever, and there was one death from ague. Two admissions are recorded for puerperal septicæmia, with fatal result in both cases. The admissions for debility numbered 291, and 3 deaths are returned under this head. Rheumatic affections caused 27 illnesses, three being cases of rheumatic fever; tubercular disease of the lungs caused 9 admissions and 5 deaths, and there was one fatal case of cancer. Among local diseases

nervous affections caused only 25 admissions, of which 11 were for some form of neuralgia; two deaths occurred, one from apoplexy and the other from paralysis. Diseases of the circulatory and respiratory systems caused comparatively little sickness, but there was one death from pneumonia and another from pneumonic phthisis. Diseases of the digestive system caused 249 admissions or 129·7 per 1,000, the most frequent illnesses being dyspepsia 82 cases, and diarrhoea 71, from which there was one death: hepatic diseases caused 23 admissions, and one death from hepatitis. The admissions for diseases of the generative system were 164 in number, equal to a ratio of 85·4 per 1,000; the admissions were from various causes, the most frequent being abortive or premature labour; three deaths occurred, two in child-birth and one from metritis. In none of the remaining orders of diseases was there much sickness, and no cases, except two of sunstroke, which were fatal, require mention. One death also occurred from Bright's disease.

Children.—The average strength is recorded as 3,619, the number of admissions as 1,800, and of deaths as 171. The admission ratio, therefore, was 497·4, and the death rate 47·25. Compared with the corresponding ratios for the preceding year a considerable decrease, 118·1, is observed in the ratio of admission, and a decline of 5·79 in the ratio of mortality. Eruptive fevers caused 124 admissions, which included 20 cases of small-pox, two of which were fatal, and 92 cases of measles with 3 deaths; there were also 1 case of scarlet fever and 3 of dengue. Whooping-cough caused 63 admissions and 4 deaths. There were 12 attacks of enteric fever recorded, of which 2 proved fatal, and simple continued fever was the cause of 124 admissions and 4 deaths. The illnesses from dysentery amounted to 38, and 5 of the cases proved fatal. Malarial fevers were the cause of 243 admissions, or at the rate of 67·1 per 1,000; 29 of the cases were remittent fever, and the remainder ague; there were also three deaths from the former and two from the latter. The remaining admissions in the first group of diseases were few, but among them were four fatal cases of hereditary syphilis, five cases of erysipelas, two fatal, and a fatal case of hydrophobia. Under the head of debility 124 cases and 8 deaths are returned, and 18 deaths are recorded from immaturity at birth. Tubercular diseases were the cause of 18 admissions and 7 deaths, and among 20 cases of anæmia there was one fatal. Among local diseases, nervous affections caused 48 admissions, of which 40 with 31 deaths were cases of infantile convulsions; there were also 2 deaths from meningitis. Ophthalmic affections were frequent but mild in character. One death resulted from necrosis of the internal ear. The admissions for respiratory diseases numbered 197, or 54·4 per 1,000, over four fifths of the cases being bronchial affections; there were 5 deaths from croup, 13 from bronchitis, and 3 from pneumonia. Diseases of the digestive system caused 405 admissions, or 111·9 per 1,000; the principal causes of illness were diarrhoea 260 cases and dentition 82; from the former there were 26 deaths and from the latter 15; one death also occurred from quinsy, colic, and jaundice respectively. With the exception of cutaneous affections, which caused 57 admissions, the remaining orders of local diseases show very little sickness; there was, however, one death from splenitis and one from acute nephritis. Under the head of poisons a case of poisoning by opium with fatal result is returned. All the remaining admissions were due to accidental injuries, principally contusions, wounds, and burns; and three deaths are recorded, one from burns and scalds, heat apoplexy, and drowning respectively.

SANITARY CONDITIONS.—The following are the principal remarks on the health and sanitary condition of the different divisions and stations throughout the year, taken from the report of the Principal Medical Officer:—

Presidency District.—The barracks at all the stations in the plains in this district are double-storied and well built; they are thoroughly ventilated, and there was no over-crowding. The clothing of the men is suitable to the climate, and all the arrangements for the preservation of health are satisfactory. At Calcutta the number daily sick was in excess of the average, but this was due to the cases of illness which arrived from Burma, as well as to the prolonged and oppressive wet season which was productive of fever. Two cases of cholera occurred, one in the station hospital, Alipore, and the other in the military prison, Fort William. In the neighbouring city cholera prevailed to a serious extent during the last three months of the year, and it speaks well

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for the sanitary condition under which the troops live that the disease did not appear among them. Improvements are being made in an insanitary locality near Fort William, and works are in progress to connect its drainage with the main system of the city, and to provide a sufficient supply of water for flushing purposes. At Dum Dum, it is stated, continued and malarial fevers are prevalent, and dysentery has increased of late years; this is in some measure dependent on certain defective conditions, such as lowness of position and consequent difficulty of surface drainage, swampy surrounding country, and indifferent water supply. The general sanitary condition of the station is, however, very good, and improvement in the water supply is being effected. At Darjeeling the sanitary condition of the station is excellent. The mountain battery barracks, situated at Goompahar, at an elevation of 7,900 feet above sea level, were completed and occupied during the year. They consist of three blocks, each accommodating 30 men, with a closed verandah which forms a dining-room and day room. There is a kitchen common to all, but each block has separate lavatory and latrine arrangements. These barracks are said to be in every way suited to the purpose for which they are intended.

Allahabad Division.—The general sanitary condition of the various barracks, hospitals, camps, &c. were satisfactory, and no serious defects were noticed. At Allahabad, both in the cantonment and fort, malarial fevers were prevalent after the rains had ceased, and the extensive inundated lands had become exposed to the heat of the sun; the troops in cholera camp at Debbhaura were also much exposed to malarial poison. At Cawnpore the general sanitary conditions of the cantonment were good, but the drainage and sanitary state of the sudder bazar is bad. Much was done during the year in lopping off the lower branches of existing trees and planting young trees in suitable situations, as well as in the cultivation of grass, which measures had beneficial results. At Dinapore cholera was prevalent during the latter part of the year, most of the cases among the troops coming from the temporary barracks, which are close to the river, badly planned and built, and subject to malarious influences. At Benares the general health was good, and sanitation was well attended to, but the barracks are old, and surface drainage difficult to carry out, owing to the level nature of the ground. At Chunar the general sanitary condition of the station is excellent, and the health of the garrison was better than in the previous year.

Oudh Division.—The sanitary condition of the different barracks and hospitals was satisfactory, and no important recommendations were considered necessary. At Lucknow cholera was present in the surrounding districts, but only two cases occurred among the troops. As already shown, there was an increase of prevalence of enteric fever, but no sanitary defect existed to account for it. Dengue also prevailed during the autumn, but not to such an extent as in the preceding year. The military prison at Kaiser Bagh was vacated, a building in cantonments having been made over for that purpose. The new arrangement is very satisfactory, the prisoners being removed from the neighbourhood of the native city, where disease in an epidemic form is often prevalent. The general health of the troops at Fyzabad was fair, and the sanitary condition of the barracks was satisfactory. The situation of the station, however, renders it unsuitable for a residence for Europeans, as it is but little above the level of the river when in flood. Large tracks of land in the vicinity become submerged by flood water, and subsequently exposed to great solar heat; malaria consequently results. The cantonment is also exposed to the risk of epidemics owing to the stream of pilgrims constantly to and from the sacred shrine of Ajodhia. At Sitapur the health of the troops was in all respects most favorable, and though cholera prevailed in every village in the surrounding district the cantonment was free from it. With the exception of somewhat faulty means of disposal of refuse water there is no defect in sanitation in the station.

Rohilkund District.—The general health conditions throughout the district were satisfactory, but enteric fever was more prevalent than in the preceding year. At Bareilly the barracks and outbuildings, &c. were in good sanitary condition, and the general health of the troops was good. Cholera prevailed generally among the civil population, but only one case occurred amongst the troops. At Moradabad the health of the troops was fairly good, but malarial

sickness was prevalent. One barrack building is of modern construction, fulfilling all sanitary requirements; the other was originally a cutcherry, and is quite unsuited for the purpose, the central room being dark and badly ventilated, and surrounded by occupied verandahs. The drainage also of this cantonment is not entirely satisfactory. At Shahjehanpur the sanitary condition of all buildings in the cantonment was very satisfactory. At Naini Tal the sanitary state of the barracks and their vicinity was satisfactory, and health was good generally. Some invalids from Burma derived but little benefit during the rains, but the cold weather had great effect in restoring them to health. At Ranikhet the arrangements for a pure water supply were insufficient, and had to be supplemented by water from a doubtful source. It is thought that the prevalence of enteric fever, may be attributed to this cause. In other respects the sanitary condition of everything connected both with the barracks and the camp was satisfactory. The health of the troops at Chaubattia was good, though enteric fever prevailed to a certain extent. This, however, is believed to have been imported. The troops live in huts with wooden sides and iron roofs, and although the condition of the station was generally good, there was room for improvement in some matters. The married soldiers' quarters were small and uncomfortable, and the means of disposal of refuse were objectionable.

Saugor District.—The health of the troops at Saugor was good and the sanitary arrangements satisfactory. More than half the total sickness was due to malarial fevers and venereal disease. It is stated of Jubbulpore that no sanitary defect could be discovered to account for the occurrence of certain cases of enteric fever. The only sanitary improvements effected were a new latrine for the station hospital and catch-pits for the disposal of refuse water in barracks. At Nowgong the men were healthy. Owing to the increased strength of the garrison by 200 men the lower rooms of the barrack, which were formerly not used for this purpose, have been occupied by the troops, and an additional barrack-room has been completed. Pachmarhi was not healthy during the year, owing to the prevalence of malarial fever. This is attributed in part to the excessive undergrowth in and around the station, but no doubt in many cases the illness was contracted in the plains. It is thought the place is scarcely suited for a sanitarium, the climate, during the hot weather and the rains not affording sufficient change for men from the plains. It has been suggested to quarter a regiment newly arrived in the country, as the men would become gradually accustomed to a tropical climate. Some of the barracks have a double roof of metal without an inner lining of wood, while others have a single roof of the same material with a lining of wood, which forms a ceiling. Both are described as being low and extremely hot; in fact, the observations at this station go to show that the average temperature of the place in the hot weather is only about 10 degrees below that of one of the hottest stations in the country.

Gwalior District.—The rendition of Morar and the Gwalior Fortress in the month of March reduced the strength of the British troops in this district, Jhansi and Sipri being the only stations now occupied. The health of the troops at Jhansi was indifferent, owing to the prevalence of malarial, continued, and enteric fevers. The Deputy Surgeon-General is of opinion that the latter disease was produced by importation from Morar, its occurrence at Jhansi being rare previous to the occupation of the latter place by a larger garrison. Cholera also broke out in August, not a trace of the disease being present in the bazar, city, or district. The sanitary conditions of the barracks and hospital were good, with the exception of some temporary over-crowding, and no defect existed to account for the outbreak of cholera and the continued prevalence of enteric fever. During the greater part of the year tents were used to avoid overcrowding in hospital, which was not sufficiently large to accommodate the sick of the increased garrison. The station of Sipri is well situated, and from its elevation has a fairly good climate; but there was much sickness among the men of the small garrison owing to the prevalence of malarial fevers, and of venereal disease. The sanitary conditions of the station are said to be satisfactory in all respects.

Meerut Division.—The general health of the men compared favorably with that in the preceding year, and at most of the stations there was a decrease of sickness, in some to a marked extent. In all the stations sanitary matters

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received careful attention, and any defects noticed were of a trivial character. At Meerut malarial fevers are more prevalent than formerly, and this is attributed to the rise in the subsoil water, which from being about 14 feet below the surface in 1873 is now only 9 feet. The formation of the Jumna canal is said to have caused this. At Fatehgarh, owing to the drying up of large tracts of land which become inundated by the river Ganges while in flood, malarial fevers are very prevalent in the autumn, but the sanitary condition of the cantonment itself is satisfactory. At Agra also ague was very prevalent, but this was said to be owing in some measure to the men having contracted the disease at their former station. The sanitary state of the barracks and cantonment is reported to be excellent. The troops at Muttra were in better health than in the previous year; this was partly due to the more healthy season, and partly to the fact that the men were more acclimatised. The barracks are old, and until recently were not satisfactory, but four of them have been repaired and one has been entirely remodelled. The small rooms at either end of each barrack bungalow, designed for single non-commissioned officers, are not satisfactory, but the sanitary state of the barracks is good in other respects. At Delhi the health of the troops was not satisfactory, chiefly on account of malarial fevers. The sanitation of the fort is good; the barracks are three-storied buildings, well built but very hot; they are badly situated, being surrounded by a high wall on three sides, and open only on the river face. At Roorkee the general health was good and the sanitary conditions satisfactory. With regard to Landour it is reported that after the greater number of convalescents had left the dépôt at the close of the season about a hundred men from Agra and Delhi, who had been much weakened by attacks of fever during the rains, were sent up for change. The experiment was very successful. After a month it was found that the cold, bracing weather had proved so beneficial that most of the men were able to rejoin their regiments for duty. The sanitary state of the barracks, &c. was good. At Chakrata a camp for drafts of recently arrived young soldiers was formed with excellent effect. The condition of the surface drainage at this station was bad, but subsequently was partially improved.

Sirhind Division.—At Umballa the health of the troops was on the whole good during the year, and malarial fevers declined considerably in frequency. The sanitary state of the barracks and cantonment was good. Excepting the ordinary repairs to barracks and other buildings, no changes occurred, and no recommendations of importance were considered necessary. The station of Jullundur was not so healthy as in the previous year, but the increase of sick rate is not to be attributed entirely to local insanitary conditions, as corps passing from the camp at Delhi leaving their sick at this station for treatment in some measure accounts for the excess. The chief causes of sickness were climatic. The barracks, hospital, &c. were in excellent sanitary condition, but occasional difficulty was experienced with the surface drainage on account of the level nature of the ground. At Kasauli the general sanitary conditions of the dépôt were satisfactory, but at one house in the civil lines at a distance from barracks, diphtheria occurred owing to bad sanitary arrangements; representations were made, and the defects were remedied. The building used for sick officers was in a dilapidated condition, and its removal was recommended on sanitary grounds. At Subathu the health of the men was good, and the sanitary condition of the station and its surroundings excellent. At Dagshai, though the sanitary arrangements of the station are reported to be excellent, sickness and mortality was a good deal increased as compared with the preceding year; this was due to the greater prevalence of fevers generally, and especially to the fatal nature of the enteric fever which prevailed, particularly among the young soldiers of the last arrived draft. At Jutogh and at Solon the general health of the troops was good, and the sanitary arrangements satisfactory. The huts at Solon are wooden, with mud floors, and shingle or sheet-iron roofs; it was recommended that concrete floors should be provided, and verandahs added to the huts.

Lahore Division.—The general health of the troops at all the stations was good, except at Mean Meer, where fever prevailed and caused many deaths. Enteric fever was general throughout the stations, and more than usually prevalent. The general sanitary condition of all the stations in the divisions was good. Owing to the very level nature of the country, surface drainage at all the

stations in the plains in this division is a difficulty, in spite of the great expense which has been incurred in the construction of the masonry drains for carrying off the water. It is remarked that the year under report was an exceedingly healthy one at Mooltan in respect of malarial fever. The air was very dry, and the annual rainfall amounted to a little over six inches. Experience has shown that malarial fevers occur in Mooltan in direct ratio to the rainfall. The upper stratum of the soil consists of a tenacious clay, which holds the water to such an extent that the heaviest rain percolates only a short distance, the greater part remaining on the surface. At Amritsar the larger portion of the garrison is stationed in cantonments, but a detachment of artillery is quartered in Fort Govindghur, close to the city, where the barracks are old and badly ventilated. The fort is surrounded by a broad shallow ditch of stagnant water, and is an objectionable station for troops. At Dalhousie a summer camp was formed for 400 recently arrived young soldiers on a spur about 300 feet higher than the chief range of barracks at Balun; the men enjoyed good health throughout the summer. The sanitary condition of the whole station is reported to be excellent. At Bhagsu, also, a small station for the accommodation of convalescents, &c. from Julundur, the health conditions were good and the sanitation satisfactory, except that the water supply was liable to pollution in consequence of its being conveyed in open channels.

Rawal Pindi Division.—When compared with that in the previous year, the health of the troops in the division was unsatisfactory. The summer was unusually hot, and large drafts of young soldiers arrived late in the season. Enteric fever caused much sickness and loss. At Rawal Pindi this disease was unusually prevalent, but it is reported that the sanitary arrangements at the station were in excellent order, and no sickness could be attributed to any defects in this respect. Of Attock it is stated that the health of the troops can never be satisfactory in a station situated as it is, where the heat is so intense and trying for many months in the year. The walled fort, with its crowded and obsolete buildings, is not suitable for European troops, but the sanitary conditions are as favorable as circumstances will admit of. At Sialkot the troops suffered from sickness severely during the year, enteric fever being the chief cause of loss and inefficiency. The disease occurred in all parts of the cantonment and amongst all classes. Every effort was made to ascertain if any local cause existed which could account for the outbreak, but no special sanitary defect was discovered. At Campbellpore there was difficulty regarding surface drainage, and a system of masonry drains was recommended, but expense prevented their adoption. The planting of trees is being carried out. At Murree the general sanitary condition of the station was satisfactory, and the health of the troops good, and a similar report is made regarding the different camps on the hills in the vicinity.

Peshawar District.—The general health of the troops was about the same as in the previous year, but the loss by death was nearly double, owing to the unfavorable season, the heat was unusually severe causing many cases of heat apoplexy and increasing the mortality from enteric and other classes of fever. At Peshawar the sanitary conditions were favorable. During the year the barracks were re-modelled and the hospital re-built. The water is supplied from the Bara river, and is conveyed a distance of five miles in a masonry channel to a tank, where it is filtered, and then passed through iron pipes to the cantonment. Restrictions have been placed on the irrigation and high cultivation of land within cantonment limits. At Nowshera fevers were prevalent, but the sanitary condition of the station was all that could be wished. At Cherat the health of the troops was fair, and was at any rate an improvement on the previous year. All the men sent up from the stations below improved greatly by the change. The majority of the troops are encamped on the hill sides, there being only two small barracks. The temperature during the day was often excessive in the tents, and the cold at night considerable, so that the men were exposed to great variations. The sanitarium, owing to its climate and unfavorable situation, does not fulfil the conditions required, but it is the best available in the district, and it is a great advantage to be able to transfer troops from Peshawar and Nowshera even to a slightly cooler locality.

Quetta District.—Quetta is situated at an elevation of 5,500 feet in a wide valley surrounded by high hills on the north, north-west, and south. The

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upper soil is sand, or porous gravel, overlying a stiff clay. Where the latter approaches the surface the soil becomes wet, and this condition exists at the southern, or civil portion of the station, where a system of deep drainage is being carried out. The portion of the station lying to the north is about 90 feet higher than the remainder, and it is here that the British troops are quartered. The surface soil in this part is well drained, the water-holding stratum being at some depth. The variations of temperature are great, especially in October, September, April, and November, and during these months there was increase of sickness. The present water supply from the hills on the north is very unsatisfactory, and sanction has been given for a fresh supply to be obtained from a spring four miles to the north-east of the station, whence it is intended to lay down iron pipes to the several barracks. The sanitary condition of the barracks was very indifferent, and the following were the chief defects: Insufficient supply of water for lavatories, inadequacy of means of disposal of refuse water, indifferent ventilation of barracks, and want of cleanliness in the latrine arrangements. In the month of December the new station hospital was opened, and the old hospital, which was quite unfit for occupation, abandoned. The new buildings are of the standard plan, but at present the accommodation is inadequate to the requirements of the force. The general health of the men was favorable as compared with that in the preceding year. Ziarat, a place about 63 miles from Quetta, in a north-westerly direction, on a steep mountain about 9,000 feet above sea level was occupied as a sanitarium, but the site was not satisfactory, and it appears probable that it will not be re-occupied. At Zarghun another sanitarium was formed about 17 miles from Quetta, and 8,400 feet above sea level. The climate is good and the air bracing, the water abundant and of good quality, and the convalescents benefit much from their residence there. At Zakobi also an encampment was formed in the hot weather with satisfactory results, as well as at three or four other places.

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The average strength of warrant officers, non-commissioned officers, and men serving in the Command (exclusive of those on active service in Upper Burma) during the year was 11,199, being higher than in the preceding year by 785. The most important of the principal statistics of sickness, mortality, invaliding, &c. among the troops are shown in the subjoined table:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Constantly Sick.
11,199	15,296	182	4	186	267	9	903·63	1365·8	16·60	23·84	15·09	80·63

Compared with the corresponding ratios in the preceding year a considerable increase is observed in the ratios of sickness and mortality, amounting to 203·4 per 1,000 in the admission rate, to 6·81 in the death rate, and to 14·81 in the rate of constantly sick. In comparison with similar average ratios for the preceding 10 years a marked increase is observed in all these ratios, being 183·6 per 1,000 in the ratio of admission, 2·58 in that of mortality, and 21·10 in that of constant inefficiency through sickness. The average sick time to each soldier was 29·45 days, and the average duration of each case of sickness 21·56 days, being longer than the corresponding periods in the preceding year by 5·41 days and ·88 days, and than the similar decennial average periods by 7·70 days and 3·16 days respectively.

The loss to the Command by death and invaliding to England during the year was 449 men, and the total loss to the service by death and final discharge as medically unfit was 355 men, equal to 31·69 per 1,000 of strength as compared with 23·72 per 1,000 in the previous year.

In Abstract XXIII. is a table taken from the report of the Principal Medical Officer, Deputy Surgeon-General T. Tarrant, M.D., showing the average strength, admissions, deaths, &c. in the different circles and stations in the Command. With regard to the Burma division it must be remembered that the statistics refer to Lower Burma only and not to the recently-annexed Upper Burma, where the troops were on active service. Still the statistics for Lower Burma are, of course, greatly influenced by sickness and mortality of troops going to, and particularly returning from, field service. Thus the highest admission ratio of any circle was 1886·6 per 1,000 in Burma, as also the highest mortality rate, 34·30, and the highest ratio constantly sick 106·98 per 1,000, being an increase of 658·6, 21·64, and 46·58 per 1,000 respectively on the corresponding ratios in the preceding year. The next highest ratios were all in the Presidency or Eastern circle, and were probably influenced to some extent as the division above-mentioned by the same causes; the admission ratio was 1,801·8, the death rate 25·54, and the constantly sick rate 92·95 per 1,000. Compared with the results in the previous year there is an increase of 660·0 in admission rate, one of 6·60 in the constantly sick rate, and one of 18·08 in the death rate. The lowest admission rate was 1054·8 per 1,000 in the Bangalore division, showing a decrease of 160·1, the Hyderabad and Nagpore circles coming next above with 1171·4 and 1209·7, both being slightly increased over the rate in the previous year. Mortality and average daily sick were lowest in the Nagpore Force, 3·38 and 62·01 per 1,000 respectively, though both were slightly higher than in the previous year. The Bangalore division also had a low mortality rate, 6·13 per 1,000, and a low rate of inefficiency through sickness, 65·03 per 1,000. With regard to individual stations, excluding those whose average annual strength was less than

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100, and hill depôts, the highest ratio of admission occurred at Thayetmyo, 2910·2 per 1,000, which is double that of the preceding year, and much above the average rate of the preceding 10 years. It is reported by the medical officer in charge at this station that this increase is due to the fatigues and hardships of field service in notably malarious districts. A large proportion of the admissions and deaths were cases from Upper Burma and from flats conveying troops up and down the river. The next highest admission rate was 2386·6 at St. Thomas' Mount, which is also double that of the preceding year, and much above the average. This was partly due to the effects of field service and partly to the amount of sickness which occurred in one battery just arrived from England, and consisting chiefly of young soldiers. The admission ratio next in order was 2137·2 per 1,000 at Malliapoream, which is considerably above corresponding ratios in former years. The increase is said to have been caused by the great prevalence of venereal disease in a small average annual strength. The lowest admission ratio was at Bangalore, 938·6 per 1,000, having declined from that in the preceding year by 102·6, and being below the decennial average rate by 207·0. The admission ratio at Port Blair was also low, 939·8 per 1,000, and, though a slight increase on the previous year's rate, was not much above the average. The ratio next above was 1122·2 per 1,000 at Belgaum, where it is said that the general health was remarkably good. The highest ratio of mortality was 54·86 per 1,000 at Thayetmyo, due in great measure, as shown above, to the effects of active service. The ratio next in order was 39·74 at Rangoon, influenced by the same cause, followed by 33·03 at Madras to some extent affected by it. There were low ratios of mortality at Bellary and Kamptee, 3·65 and 3·58 per 1,000 respectively, and at Malliapoream no death occurred. Compared with corresponding ratios in the preceding year, increase of mortality ratio is observed in those stations especially which were influenced by the effects of field service. Among other stations a decrease occurred in the ratios of several, and in some there is very little difference. With regard to the ratios of constant inefficiency the highest were 159·60 and 100·66 per 1,000 in Thayetmyo and Rangoon respectively, and 107·84 in Malliapoream. The lowest ratios were 30·07 at Port Blair, and 56·35 at Bangalore. The hill depôts of Poonamallee and Wellington show high ratios of sickness and mortality, especially the former, due to the invaliding from Burma.

In Abstract XLIV. is a table taken from the report of the Principal Medical Officer, showing the most important of the health statistics of the different arms of the service as well as of the several corps which served in the Command during the year. In the cavalry the admission rate was 1057·2 per 1,000, which compares favorably with the corresponding rate in the previous year, showing a decrease of 82·4; the ratio of mortality, 10·50, and that of constantly sick, 64·18, on the other hand, are increased in this comparison by 3·74 and 5·62 per 1,000 respectively. In the artillery the admission ratio was 1312·6, the death rate 13·26, and the constantly sick rate 68·21 per 1,000; all these ratios are greater than those with which they correspond in the previous year, the admission rate by 131·4, the mortality rate by 4·15, and the rate of constant inefficiency by 3·08. In the infantry also all these ratios are increased as compared with the preceding year, the admission rate, 1376·2 per 1,000, being higher by 220·8, the death ratio 16·51, higher by 8·05, and the constantly sick rate, 81·76, higher by 18·52 per 1,000. Taking individual corps it is observed that in the cavalry the regiment with the highest ratios of sickness and mortality was the 12th Lancers, stationed at Bangalore, the admission rate being 1110·4, the death rate 13·25, and the constantly sick rate 68·43 per 1,000; the 14th Hussars gave corresponding ratios somewhat below these in each instance; this regiment was quartered at Secunderabad for nearly 10 months of the year, and then proceeded to England. The 7th Hussars only arrived in the country in the latter part of December. In the artillery, taking batteries whose average annual strength was over 100, the highest admission rates were 1827·1 and 1823·1 per 1,000 in Q and P Batteries, 1st Brigade, respectively, quartered at St. Thomas' Mount, the next being 1567·4 in I Battery, 3rd Brigade at Secunderabad; the lowest ratios were 657·7 per 1,000 in M Battery, 2nd Brigade, 687·9 in S Battery, 1st Brigade, Royal Artillery, and 745·0 in M Battery, B Brigade, Royal Horse Artillery, all

quartered at Bangalore. The highest mortality rate in any battery over 100 strong was 27·40 per 1,000 in H Battery, B Brigade, Royal Horse Artillery; but this was dependent on only 4 deaths; in four batteries there was no mortality, and in the remainder various rates. The highest ratio of inefficiency from sickness was in P Battery, 1st Brigade, 92·31 per 1,000, and the lowest 44·03 in G Battery, 2nd Brigade, at Bellary. The highest admission rate in any regiment of infantry, average annual strength over 100, was 2105·9 per 1,000 in the 2nd Battalion, South Wales Borderers, quartered one third of the year in Madras and the remainder in Burma; the next ratio was 1933·2 in the 2nd Battalion, Royal Scots Fusiliers, stationed in Burma; the lowest admission ratio was in the 2nd Battalion, Oxfordshire Light Infantry, quartered at Bangalore, and was 1034·1 per 1,000, this corps was only nine months in the Command after arrival from Egypt; the ratio next above was 1044·6 in the 1st Battalion, Rifle Brigade, quartered the greater part of the year at Belgaum. The highest mortality was 48·54 per 1,000 in the 2nd Battalion, Somersetshire Light Infantry at Rangoon, and on field service; the next ratio being 24·28 in the Royal Scots Fusiliers; the lowest mortality ratios were 2·84 and 3·25 in the 2nd Battalion, Royal Munster Fusiliers, at Kamptee chiefly, and the Oxfordshire Light Infantry respectively. The greatest amount of constant inefficiency through sickness was 110·77 per 1,000 in the Royal Scots Fusiliers, and 109·69 in the South Wales Borderers, while the lowest ratios of constantly sick are found in the Oxfordshire Light Infantry, and the Royal Munster Fusiliers 58·44 and 59·57 per 1,000 respectively.

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With a view of determining the effect of age and of length of service in the country on sickness and mortality among the troops, calculations have been made based on the annual returns for 1886, and the results are given in the following tables :—

TABLE showing the Influence of Age on the Sickness, Mortality, and Invaliding among the Troops in the Madras Command during the year 1886.

Ages.	Average Strength.	Admissions.	Deaths in Command.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years -	524	474	6	3	904·6	11·45	5·72
From 20 to 24 years -	4,825	8,082	87	110	1861·5	18·03	22·80
„ 25 „ 29 -	3,716	4,222	55	92	1136·5	14·80	24·76
„ 30 „ 34 -	1,301	1,013	16	37	778·6	12·30	28·44
„ 35 „ 39 -	542	395	15	18	728·9	27·67	33·21
Over 40 years -	157	147	3	7	936·3	19·11	44·59
Not stated -	135	63	—	—	466·7	—	—
Total -	11,199	15,296	182	267	1365·8	16·24	23·84

From the above it will be observed that the highest ratio of admissions was 1861·5 per 1,000 among men between 20 and 25 years of age; in the next quinquennium there is a considerable decrease, one of 725·0; and there is a further decline in admissions in each quinquennial period up to 40 years of age; above that age an increase occurs, but the average strength has by this time become small. Mortality follows a very similar course, being low among men under 20 years of age, increased considerably among men between 20 and 25 years of age, above which age the ratio declined in the two succeeding quinquennia, but rose again over that period. Invaliding will be more particularly alluded to subsequently, but it may be mentioned that the ratio increases generally with age.

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TABLE showing the Influence of Length of Service in the Country on the Sickness, Mortality, and Invaliding among the Troops in the Madras Command during the year 1886 :—

Length of Service.	Average Strength.	Admissions.	Deaths.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year - -	2,963	4,269	51	19	1445·6	17·27	6·43
From 1 to 2 years -	1,486	2,391	21	54	1609·0	14·13	36·34
" 2 " 3 " -	1,653	2,676	20	40	1618·8	15·73	24·20
" 3 " 4 " -	1,022	1,599	14	35	1564·6	13·70	34·25
" " 5 " -	988	1,295	23	35	1310·7	23·23	35·42
" 5 " 6 " -	790	771	9	13	988·4	11·54	16·67
" 6 " 7 " -	634	657	5	15	1036·2	7·89	23·66
" 7 " 8 " -	573	499	7	14	870·8	12·22	24·43
" 8 " 9 " -	307	246	6	4	801·3	19·54	13·03
" 9 " 10 " -	223	166	4	7	744·4	17·91	31·39
Over 10 years - -	445	664	16	31	1492·1	35·95	69·66
Not stated - -	135	63	—	—	466·7	—	—
Total - -	11,199	15,296	182	267	1385·8	16·24	23·84

The above shows that the greatest amount of sickness occurs among men in first four years of their service in the country, the admission ratios all being high; those of the second and third years' service the highest; in the fifth year of service the sick rate shows a decline, which, with one exception, is continued in each succeeding year of service up to the tenth, over which year it increased again. The ratio of mortality was 17·27 per 1,000 among men in their first year of service, but those of men in the next three years of service were all lower; in the fifth year there was a considerable rise, after which the ratio declines again, and is comparatively low up to the ninth and tenth year of service, when it rises again. Invaliding ratios were, with the exception of the first year, generally higher in the first five years of service in the country than subsequently up to the tenth year of service, over which the ratio again increased.

The admissions and deaths in the different groups and orders of diseases are shown in Abstract XXII., and the relative prevalence of sickness and mortality from them in each of the administrative circles in Abstract XXIV. taken from the report of the Principal Medical Officer.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—Among the specific febrile diseases *eruptive fevers* caused 56 admissions, equal to 5·0 per 1,000, which is considerably in excess of the corresponding rate in the previous year; the increase is due to the occurrence of an epidemic of rose rash, 43 cases are returned at Bangalore in the 2nd Battalion Oxfordshire Light Infantry. It is said there had been cases of measles in the regiment prior to its leaving Egypt in the early part of the year, and also there had been some cases of measles on board ship on the way out. Ten cases of measles are returned, 4 at Bangalore, which are believed really to have been cases of *rötheln*, being the immediate precursors of the epidemic above alluded to. One man was attacked with small-pox as compared with 6 in the previous year. The case occurred at Poonamallee, three children of the man attacked also contracted the disease, but all did well. Precautionary measures were taken and the disease did not spread.

Enteric Fever caused 139 admissions and 44 deaths, equal to ratios of 12·4 and 3·93 per 1,000 respectively, which are above the corresponding ratios in the preceding year by 5·4 and 1·72, and above the average ratios for the

preceding five years by 5·8 and 2·08 per 1,000 respectively. The ratio of mortality to attack, 31·6 per cent., was almost identical with the ratio in the previous year. In Abstract XXV. is a table taken from the report of the Principal Medical Officer, showing the stations at which the admissions and deaths from enteric fever took place in each quarter of the year. It will be observed that the greatest prevalence and mortality was in the third quarter of the year, 80 cases and 21 deaths, next in the second quarter, 29 cases and 13 deaths, followed by the first quarter with 17 cases and 5 deaths, and, lastly, by the fourth quarter with 13 cases and 5 deaths. Nine stations in all were attacked, showing 136 cases; the remaining three being among troops on the march. More than half the attacks and deaths, 76 and 25 respectively, occurred in one station, Secunderabad. The cases were divided among the three station hospitals, 9 with 4 deaths at the central station hospital, 6 with 1 death at the north station hospital, and 61 cases with 20 deaths at the south station hospital. Concerning the cases at the central hospital it is stated that the causes of the disease could not be traced, but it was believed that some of the cases might have been contracted in the villages in the vicinity of the station. Of these nine cases six of the men were under 24 years of age and the remainder over; and eight men were under three years' service in India, three being under one year. Of the six cases at the north hospital it is stated that they were not very severe and all made good recoveries. The fatal case was that of a man who had been admitted in the previous year. Of these [six] cases two of the men were under 24 years of age and the remainder over; and two had under one year's service in India and the remainder over two years. The cases in the south station hospital occurred chiefly among men of the 1st Battalion, Hampshire Regiment, and the 2nd Battalion, Middlesex Regiment, 33 in the former and 24 in the latter; there were also two cases in a detachment, 2nd Battalion, Hampshire Regiment, and two cases in the military prison. The causation of the disease cannot, it is said, be very positively pronounced. The sanitary arrangements in barracks were carried out fairly with the conservancy establishment allotted, but in the very hot weather the latrines were not wholly satisfactory. Of the total number of cases treated 43 were under 24 years of age and 18 were over that age; and 46 of the men attacked were under two years' service in India, 40 of these being under one year's service. At Bangalore there were 30 cases and 8 deaths from enteric fever, against 18 cases and 1 death in the previous year. The medical officer in charge south station hospital states that the disease appears to be endemic in the station and was prevalent among the younger soldiers. The cause could not be discovered, but in the opinion of the medical officers the men do not contract the disease in barracks, but outside, either in the bazars or villages where they are exposed to insanitary conditions, and drink filthy water and common bazar beverages. Out of the 30 cases 20 were of men who were under 24 years of age, and 22 were men under two years' service in India, 18 of these being under one year's service. At Wellington there were 11 admissions and 2 deaths, in the preceding year there had been 3 admissions and 2 deaths. The disease was prevalent in the vicinity before any case appeared among the troops. The disease appeared among the men first in May; the cases came from different blocks and different rooms in barracks, and two men were attacked in hospital where they had been under treatment for three months prior to seizure. The sanitary condition of the barracks was good, and the bazars were not more dirty than places occupied by natives under similar circumstances; the causation of the disease could not be made out. At Kamptee there were six cases of enteric fever and one death; it is stated that the probable cause of the disease was want of care in carrying out the dry earth system in the latrines, as otherwise the sanitary condition of the lines is excellent. Four cases and one death occurred at Belgaum, but it is stated that it was found impossible to trace the origin of the disease to any insanitary condition in the barracks or in their vicinity. Three cases of enteric fever took place at Rangoon, and all of them proved fatal; there were also three cases at Cannanore, but these recovered. In addition to the above there were two cases at Thayetmyo and one at Bellary, all of which were fatal. Of three cases which occurred on the march one was fatal.

Other Continued Fevers caused 1,257 admissions and one death, the ratio of admission, 112·2 per 1,000, is considerably above that in the preceding year,

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and is also above the average ratio of the previous five years by 36·9 and 48·7 per 1,000 respectively.

The highest ratio of prevalence of these fevers was in the Eastern district, the ratio being 293·2 per 1,000, a very large increase on the corresponding rate for the preceding year. This ratio was followed by 182·2 in the Hyderabad Subsidiary Force; this also is a considerable increase. The ratio of the Nagpore circle, 5·64, was, as also in the preceding year, the lowest rate of prevalence in any circle; next above this was the ratio for the Burma division, 68·0 per 1,000, which has declined as compared with the rate of the foregoing year. In the depôts the prevalence ratio reached 64·1 per 1,000, an increase of 37·4. One death from simple continued fever is returned; the case occurred at Madras.

Cholera caused only one admission and one death during the year; both these cases occurred in Burma, one was transferred from Upper Burma and proved fatal, and the other, on the march, was attacked at Rangoon and recovered.

Dysentery caused 770 admissions and 30 deaths, being in the ratios of 68·8 and 2·68 per 1,000 respectively, as compared with 54·5 and ·38 per 1,000 in the preceding year. In Abstract XXVIII. it will be seen that dysentery was most prevalent in the third quarter of the year, the ratio being 26·0 per 1,000; this was followed by 16·3 in the fourth quarter, 13·1 in the second, and lowest, 13·10 per 1,000, in the first quarter. Mortality also was highest in the third quarter, 1·37 per 1,000, and lowest in the first quarter, ·09 per 1,000, the second and fourth quarters, ·59 and ·58 respectively, being intermediate. The greatest prevalence of dysentery in any division was in the Eastern, including the depôt, 151·4 per 1,000; this was followed by 116·3 per 1,000 in the Burma division, while the lowest ratio was 14·7 per 1,000 in the Nagpore Force, the next above being 33·2 in Bangalore. Compared with corresponding ratios in the preceding year there was an increase of prevalence of dysentery in the Eastern, Bangalore, Nagpore, and Burma divisions, and a decline in the Western district and Hyderabad Force. The highest mortality rate was 6·40 per 1,000 in Burma, the Eastern district being close with 6·12; in the Nagpore district there was no mortality, and in the Bangalore division only a ratio of ·35 per 1,000. Compared with the preceding year mortality increased in all the administrative circles except in that of Nagpore in which there was none in either year.

Other diseases of this sub-group show a ratio of 1·4 per 1,000, dependent on 16 admissions, 11 of which were for mumps and 5 for influenza.

Malarial Fevers caused 1,573 admissions and 8 deaths, being in the ratios of 140·5 and ·71 per 1,000 respectively, which are greater than the corresponding ratios in the previous year by 67·3 and ·52, and than the similar average ratios for the preceding five years by 27·0 and ·50 per 1,000. The average number constantly sick, 5·87 per 1,000, is higher by 3·52 and 2·42 per 1,000 respectively in these comparisons. Of the total number of cases 1,497 were returned as ague, 75 as remittent fever and one as malarial cachexia. All the deaths were due to remittent fever; four occurred at Rangoon, three at Thayetmyo, and one at Secunderabad. The greatest prevalence of malarial fevers was in the Burma division, the ratio being 450·0 per 1,000, which is a considerable increase on the corresponding ratio for the previous year; next comes the Nagpore circle with 277·3 per 1,000, but this is lower than in 1885 by 69·6; in the Eastern district the admission ratio was 106·2, in Bangalore 49·5, Hyderabad 36·7, and Belgaum and the Western district 37·5 per 1,000; all these are greater than the corresponding ratios in the preceding year, except that of Hyderabad. The admission rate for the depôts was 270·4 per 1,000, which is a large increase on the ratio in the foregoing year.

Septic Diseases show 12 admissions and 1 death, all cases of erysipelas; the fatal case occurred at Madras.

In the sub-group of venereal diseases it is observed that *primary syphilis* caused 1,079 admissions, being in the ratio of admission of 96·3 per 1,000. In the preceding year the admission ratio for primary syphilis was recorded as 123·3 per 1,000, but this included all those simple venereal ulcers, &c., now returned under diseases of the generative system according to the method of registration dependent on the new nomenclature of diseases. If the ratio of admission for simple venereal ulcers be added to that of primary syphilis in the year under report, the total ratio would equal 144·0 per 1,000, which is in

excess of that of the preceding year by 20·7, and of that of average of the previous five years by 37·4 per 1,000. The rate of constantly sick from primary syphilis together with that from simple venereal sores equals 10·95 per 1,000, an increase of 1·85 per 1,000 on the previous year's rate, and one of 2·69 on the quinquennial average rate. Madras.

Secondary syphilis was the cause of 3·8 admissions, equal to 33·8 per 1,000 and the ratio constantly sick from this affection was 2·93 per 1,000. Compared with corresponding ratios in the preceding year an increase of 12·6 has occurred in the admission ratio and one of ·95 per 1,000 in the ratio of constant inefficiency, and, compared with quinquennial average rates, there is an increase of 11·2 on the former and ·77 per 1,000 in the latter ratio.

The admissions for *gonorrhœa* were 1,710 in number, equal to 152·7 per 1,000, this ratio is lower than the corresponding one in 1885 by 4·9, but above the average ratio by 25·9 per 1,000. The constantly sick ratio, 10·53 per 1,000, shows a decline of ·86 in the former, and an increase of 1·86 in latter comparison. Including all forms of venereal disease the total admission ratio was 330·5 per 1,000, which is above the rate in the previous year by 28·4, and above the average rate of the preceding five years by 74·5. The total ratio of constant inefficiency on account of these diseases was 24·41 men per 1,000, which is greater than the previous year's rate by 1·94 and than the average rate by 5·32 per 1,000.

With regard to the different districts it is observed that the greatest prevalence of primary syphilis, exclusive of simple venereal sores, was in the Bangalore division and reached 174·6 per 1,000; the next prevalence was in the Western district, 126·5, and then the Eastern district, 103·2; in Burma the ratio was 94·2, and in the two remaining divisions, the Hyderabad and the Nagpore Forces, the ratios of prevalence were low, 17·8 and 10·1 per 1,000 respectively. Secondary syphilis was most prevalent in the Western district, the ratio being 45·1 per 1,000, in the Burma and Bangalore divisions the ratios were 37·8 and 37·2 per 1,000 respectively, and the lowest ratio was 6·8 in the Nagpore Force. Gonorrhœa varied in prevalence from 194·1 per 1,000 in the Eastern district and 188·5 in the Western to 101·5 per 1,000 in the Nagpore Force. Taking these three forms of venereal disease together the greatest prevalence in any one district was 364·8 per 1,000 in the Bangalore division, the next, 360·1, being in the Western district. The lowest ratio of prevalence was in the Nagpore Force, being only 118·4 per 1,000, the next above being 203·0 in the Hyderabad Force. The ratio of prevalence at the depôts was high, 341·4 per 1,000, due in great measure to frequency of secondary syphilis.

In the next group of diseases *parasitic* affections caused 33 admissions or 2·9 per 1,000. Of these 25 were cases of *tænia solium*, 13 of which occurred at Secunderabad.

Alcoholism caused 139 admissions, equal to 12·4 per 1,000, which is a good deal above the average as well as above the previous year's ratio. Out of the total number of cases there were 8 of delirium tremens, but no death resulted.

Debility caused 320 admissions, and one death is recorded under this head. The admission ratio, 28·6 per 1,000, is above the average as well as above the ratio in the preceding year. The Burma circle contributed nearly one third of the total number of admissions.

In the group of general diseases not classified *rheumatism* shows an admission ratio of 31·6 per 1,000, which is slightly in excess of the corresponding ratio in the previous year, and above the average ratio also. Rheumatic affections were most prevalent in the Burma and Western divisions, and least so in the Nagpore Force. Compared with the preceding year this disease was less frequent in the Hyderabad and Nagpore circles, but more so in the remainder. Out of the total 354 admissions there were 8 cases of rheumatic fever, one of which proved fatal.

Tubercular Disease shows 54 admissions, or 4·8 per 1,000, as compared with 7·6 in the preceding year; it must be remembered, however, that in the latter year all cases of phthisis pulmonalis were recorded under this head. Tubercular affections were most prevalent in the Burma division and Hyderabad Force, and least so in the Eastern division. At the depôts the rate of admission was high, owing to the invalids suffering from these affections being

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sent up for treatment. Out of the total number of cases treated 45 were suffering from tubercular disease of the lungs, from which cause there were 7 deaths, including that of an invalid. Among the other diseases of this group were two fatal cases of cancer, three cases of purpura, one of leprosy, and 30 of anæmia; the remainder comprised non-malignant tumours, warts, &c.

LOCAL DISEASES.—*Diseases of the nervous system* were the cause of 151 admissions and 8 deaths, equal to 13·5 and ·71 per 1,000 respectively, which are below the corresponding ratios in the preceding year as well as below the average. Of the total number of cases 23 were mental affections, equal to 2·0 per 1,000. Among the admissions for nervous diseases were 78 for neuralgia, 15 for epilepsy, and 14 for paralysis. The causes of death were meningitis 2 cases, abscess of the brain 2, paralysis 2, and epilepsy and melancholia one case respectively. Nervous affections were most prevalent in the Burma division and least in the Nagpore Force. Compared with last year's return prevalence has increased in the Burma and Western districts, but decreased in the remainder.

Diseases of the Eye caused an admission ratio of 15·1 per 1,000, which is an increase of ·7 on the previous year's rate, and slightly above the average; 113 admissions out of the total 169 were cases of conjunctivitis. *Diseases of other organs of special sense* were at the rate of 13·2 per 1,000, and were slightly below the average rate, and less frequent than in the previous year. Of 140 cases of aural affection 113 were cases of inflammation of the external meatus.

Diseases of the Circulatory System caused 122 admissions and 8 deaths, being in the ratios of 10·9 and ·71 per 1,000 respectively. The admission ratio is below the average, though slightly in excess of the previous year's rate. The greatest prevalence of these diseases was in the Burma division, 13·9 per 1,000, and the least, 3·4, in the Nagpore Force. In the Western district and Hyderabad Force the admission rates have declined as compared with the ratios of the preceding year, but in the remaining administrative circles they have increased. Palpitation caused nearly two thirds of the admissions, and among the remainder were 23 for valve disease, 6 for hypertrophy of the heart, and 3 for aneurysm. The deaths were caused by valvular disease of the heart in 6 cases, and aneurysm of the aorta in 2 cases.

Diseases of the Respiratory System caused 356 admissions and 9 deaths, including that of an invalid, being in the ratios of 31·8 and ·80 per 1,000 respectively. The admission rate is slightly below the corresponding ratio in the preceding year, and differs but little from the average rate. The Burma division shows the highest prevalence of respiratory affection, 47·7 per 1,000, and the Nagpore Force the lowest, 7·9 per 1,000. These diseases were less frequent in the Burma and Eastern districts than in the preceding year, but in the remaining districts they were more so. Four fifths of the total number of admissions were bronchial affections, and among the remainder were 16 for pneumonia, 12 for pleurisy, and 23 of asthma. Of the deaths 5 were due to pneumonic phthisis, 2 to pneumonia, and 2 to asthma.

Diseases of the Digestive System.—Under this head 2,101 admissions and 34 deaths are returned, two of the latter occurring among invalids who had left the Command. The ratio of admission was 187·6, that recorded in the preceding year having been 232·8 per 1,000. Certain alterations in the registration of disease due to the new nomenclature prevent comparison between these two ratios, but if the sickness from dysentery, previously shown above, were added to the ratio of digestive disorders as heretofore it would be seen that the rate was above the average as well as the previous year's rate. The mortality ratio, 3·04 per 1,000, treated in the same manner would show an increase in both these comparisons. The highest ratio of prevalence in any circle was 256·4 per 1,000 in Burma, followed by 251·3 in the Eastern district; the lowest was 91·3 in the Nagpore circle, the next above being 101·0 in the Bangalore district. Compared with the previous year increase of prevalence is noted, especially in the Eastern and Burma divisions. The highest mortality ratio was 7·56 per 1,000 in Burma, and the lowest, ·74, in the Hyderabad Force. The ratios of sickness and mortality in the dépôts, 381·3 and 6·93 per 1,000, were higher than in the previous year. The principal causes of admission were diarrhœa 650 cases, hepatic affections 477, dyspepsia 475, and affections of the mouth and throat 299 cases. The causes of death were hepatitis 16 cases, abscess of the liver 14, and diarrhœa 4 cases.

Abstract XXVII. shows the prevalence of dysentery, diarrhoea, and hepatitis in each of the administrative circles in the Command during the year, and Abstract XXVIII., the prevalence and mortality from these diseases in each quarter of the year. Dysentery has already been alluded to above. Madras.

With regard to diarrhoea the ratio of admission was 58.0 per 1,000, being higher by 16.7 than in the previous year. The greatest ratio of prevalence was 100.6 per 1,000 in Burma, the next being 77.0 in the Eastern district, and the lowest only 14.7 in the Nagpore Force. Diarrhoea was most prevalent in the second quarter of the year, then in the third, followed by the fourth and first quarters, between which there is very slight difference. Hepatitis and abscess of the liver have an admission rate of 28.6 and a death rate of 2.41 per 1,000 as compared with 29.5 and 1.15 per 1,000 in the previous year respectively.

The Eastern district, as in the foregoing year, shows the greatest prevalence of hepatic affections, 49.9 per 1,000, Burma being next with 43.6; the lowest ratio of prevalence was in the Nagpore circle, 9.0 per 1,000, the next above being 21.0 in the Bangalore division. Mortality also was greatest in the Eastern division, the ratio being 6.12 per 1,000; in Burma the rate was 4.65, and in the Hyderabad Force was the lowest ratio, .74 per 1,000.

With regard to the time of prevalence the greatest ratio was in the third quarter of the year, 8.6 per 1,000, the next in the fourth quarter, 7.49, followed by the second quarter, 6.8, the least prevalence being in the first quarter, 5.6 per 1,000.

For *diseases of the lymphatic and glandular system*, 505 admissions are recorded, equal to a rate of 45.1 per 1,000. These affections were more prevalent than in the previous year and above the average. The greatest prevalence among the administrative circles was in that of Nagpore, 83.4, and in the Eastern 66.4 per 1,000, the least being 19.7 in the Hyderabad Force. Out of the total number of admissions three fourths were for affections of the inguinal glands.

The admissions for *diseases of the urinary system* were only 39 in number, or 3.5 per 1,000. This ratio, however, is not comparable with those of former years, owing to the changes which have taken place due to the adoption of the new nomenclature of diseases, so many affections formerly recorded under this heading being now returned elsewhere. Among the cases treated were 7 of Bright's disease and 7 of cystitis.

Diseases of the Generative System caused an admission ratio of 77.3 per 1,000, nearly two thirds of which is dependent on the admissions for simple venereal ulcer. The remainder was due principally to orchitis, balanitis, and urethral stricture.

The admission rates for *diseases of the organs of locomotion* was 5.4 per 1,000, and that for *diseases of the connective tissue* 20.3, the former being below but the latter above the average, as well as the last year's rate.

Diseases of the Cutaneous System, with a ratio of admission of 89.5 per 1,000 was about the average, though rather below the rate in the preceding year. The causes of admission were very various, boils, ulcers, and eczematous affections being the most frequent.

Under the head of *poisons* 8 admissions are recorded but no death. The cases comprised 3 of alcoholic poisoning, 2 of poisoning by dead animal matter, and 3 by scorpion stings.

Injuries caused an admission rate of 134.6 per 1,000, which is slightly above the rate in the previous year, but more above the average rate. Injuries of a general character were 18 in number, and comprised 14 for either sunstroke or heat apoplexy, and one for burns, multiple injury, asphyxia by drowning, and exhaustion respectively. There were 17 deaths from general injury returned as follows: 9 from heat apoplexy, 7 from accidental drowning, and 1 from hanging, judicial, on account of murder. Local injuries caused 1,490 admissions and 14 deaths. Of the admissions, over five sixths were due to contusions, wounds, or sprains, and of the remainder the most frequent were abrasions 84, fractures 63, and dislocations 18 cases. The causes of death were gunshot wound, suicidal, 9 cases, gunshot wound, accidental, 1 case, fracture of skull 3 cases, and concussion of the brain 1 case. Of the 9 cases of suicide by gunshot, all but one, a wound of chest, were wounds of the head. In seven cases the motive for the act was unknown; in one the man was in

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trouble about arrears of work, and in one the man had been passed over for promotion. In four of the cases it is stated that the men had been drinking hard. The verdict in six of the cases was "temporary insanity," and in three "*felo de se*." The accidental death from gunshot wound was that of a man who, when out shooting, stumbled and fell, his gun going off and blowing away the greater part of his right arm. Amputation was performed, but he died shortly after the operation. The death from concussion of the brain and one of those from fracture of the skull were the result of horse accidents. One of the other fractures of the skull was due to a fall from a balcony; but in the third case the man was picked up dead, and the circumstances attending the accident were unknown.

In addition to the amputation of the fore arm above mentioned, there were several minor operations performed, all with successful result.

Invaliding.—The number of men invalided home during the year was 267, being in the ratio of 23·84 per 1,000 of strength, which is fractionally lower than the corresponding rate in the preceding year, and is below the average ratio for the preceding 10 years by 11·22 per 1,000. The ratios of invaliding from the different stations will be seen on reference to Abstract XXIII. the highest ratio in any one station being 66·38 per 1,000 at Cannanore, followed by 51·12 at St. Thomas's Mount, and 26·18 at Belgaum; low ratios of invaliding occurred in Secunderabad 11·13 per 1,000, in Bangalore 13·77, and in Toungoo 14·28, while in Calicut, Malliaporam, Port Blair, and one or two other small stations, no invaliding took place.

The ratios of invaliding from the different arms of the service (see Abstract XLIV.) were 26·84 per 1,000 in the cavalry, 18·47 in the artillery, and 19·73 in the infantry. Compared with the corresponding ratios in the preceding year the invaliding ratio in the cavalry has increased by 7·70, while in the artillery it has decreased by 8·38 per 1,000, and in the infantry only a fractional difference occurred. Of separate corps, in the cavalry the invaliding from the 12th Lancers amounted to 26·49 per 1,000, and that of the 14th Hussars to 12·16; in the artillery, among batteries whose average strength was over 100, the highest ratios of invaliding were 75·19 in Q Battery, and 38·46 in P Battery, 1st Brigade, both at St. Thomas's Mount; low invaliding ratios occurred in M Battery, 2nd Brigade, at Bangalore, 6·71 per 1,000; in H Battery, B Brigade, 6·85; I Battery, 3rd Brigade, 7·09; and D Battery, 1st Brigade, 7·19, all at Secunderabad, and in some batteries no invaliding occurred. In the infantry the invaliding ratios varied from 52·39 and 38·83 per 1,000 in the 2nd Battalion, Royal Fusiliers, at Cannanore, and the 2nd Battalion, Somerset Light Infantry, in Burma, to 3·86 in the 1st Battalion, Hampshire Regiment, at Secunderabad, and 3·25 in the 2nd Battalion, Oxfordshire Light Infantry, at Bangalore.

With regard to the influence of age and length of service in the country on invaliding to England it will be observed, by referring to the tables given above, that the ratio of invaliding among men under 20 years of age was very low, 5·72 per 1,000; in the quinquennial period between 20 and 25 years of age it increased to 22·80 per 1,000; between 25 and 30 years of age it was 24·76; between 30 and 35 years of age it was 28·44; between 35 and 40 years it was 33·21, and over 40 years of age it was 44·59 per 1,000. The ratio of invaliding among men in their first year of service in the country was only 6·43 per 1,000, but it increased in the second year to 36·34, though it fell to 24·20 in the third year; in the fourth and fifth years the invaliding ratios were nearly equal to that in the second year, falling in the sixth year to 16·67, varying up to the ninth year the numbers being small, and then increasing steadily in the tenth year, and beyond that period. From the above it appears that increasing age causes a steady advance in the ratios of invaliding, but length of service in the Command has not an equal influence, the invaliding from the first to the fourth year being greater in proportion than in the succeeding four years. The principal causes of invaliding to England were as follows:—Dysentery 22 cases, being at the rate of 1·96 per 1,000 of strength as compared with 2·40 in the preceding year; debility 36 cases, or 3·22 per 1,000, the last year's rate being 2·79, but both were much below the average; tubercular diseases 20 cases, or 1·79 per 1,000, a slight decline from the last return, and below the average; nervous affections 32 cases, including 17 of mental disease, or 2·86 per 1,000, show a decrease of ·21, and are slightly below the

average; affections of the organs of special senses 12 cases, or 1·07 per 1,000, a decline of ·66; diseases of the circulatory system 35 cases, or 3·13 per 1,000 as compared with 2·30 in the previous year, and with an approximate average rate of 4·18; diseases of the digestive system 51 cases, or 4·55 per 1,000, which is below the corresponding rate in the preceding year by 1·21, and is also considerably below the average rate. The ratios of invaliding in the remaining orders of diseases were fractional, the principal being ·89 per 1,000 for diseases of the organs of locomotion as compared with 1·34 in the preceding year; ·80 per 1,000 for respiratory disease, a rate showing but little change; rheumatism ·71 per 1,000, secondary syphilis ·62, and injuries also ·62 per 1,000; the first of which differ slightly from the corresponding rates in the last return, while the other two have declined by 1·01 and ·53 per 1,000 respectively.

The number of men finally discharged as medically unfit for further service was 169, being in the ratio of 15·09 per 1,000 of strength. This differs from the corresponding ratio in the previous year by an increase of 1·16, and from the decennial average rate by a fractional decrease. The principal disabilities necessitating final discharge were dysentery 8 cases, or ·71 per 1,000; debility 23 cases, or 2·05 per 1,000; tubercular diseases 18 cases, or 1·61 per 1,000; diseases of the nervous system 45 cases, or 4·02 per 1,000, more than half of which were instances of mental disease; affections of the organs of special sense 16 cases, or 1·43 per 1,000; diseases of the circulatory system 17 cases, or 1·52 per 1,000; diseases of the digestive system 8 cases, or ·71 per 1,000; diseases of the organs of locomotion 9 cases, or ·80 per 1,000; and injuries 12 cases, or 1·07 per 1,000. Compared with the return for the preceding year the ratios of discharge by invaliding have increased to some extent in nervous affections, diseases of the organs of special senses, injuries, and debility, and have decreased principally in tubercular diseases and affections of the circulatory and digestive systems.

In Abstract XXIX. is given a table taken from the report of the Principal Medical Officer, showing the comparative mortality and invaliding among officers, non-commissioned officers, and men during the year under report, and for the preceding 10 years. The highest rate of mortality, 26·44 per 1,000, was among the non-commissioned officers, followed by 11·56 among the private soldiers, and by 6·42 among the officers. In the preceding year, as well as on the average of the previous 10 years, the death rate amongst non-commissioned officers was also the highest, but there was very little difference between those of officers and private soldiers. Comparing the ratios of the year under report with those of the preceding year a decrease of 1·29 per 1,000 has occurred in the mortality amongst officers, but an increase of 7·97 is observed in that of non-commissioned officers, and one of 3·90 in that of privates; and in comparison with decennial average rates there is a decline of 5·18 in the mortality rate among officers, and an increase of 7·51 in that among non-commissioned officers, but that among privates is almost unchanged. Invaliding shows the highest ratio among officers, 62·10 per 1,000, next among non-commissioned officers, 31·86, and privates, 17·99. In the previous year the ratios were in the same order. Comparing these rates with those of the previous year there is a considerable increase, 90·69 per 1,000, in the invaliding among officers, but there is a decline of 19·0 in invaliding among non-commissioned officers, and of 2·82 among privates, and compared with the decennial average ratios there is a decrease in the ratios of all three grades, in that for officers one of 2·87, in that for non-commissioned officers one of 1·95, and in that for private soldiers one of 16·90 per 1,000.

In Abstract XLVI. a return is given, furnished by the Principal Medical Officer, which shows the comparative sickness, mortality, and invaliding among those men who had extended their service in India and those who had not, in the Presidency during the year under report.

It will be observed that, as was also the case in the previous year, that the proportion of sickness, mortality, and invaliding among those men who were completing their extended service in India is less than that of the men of shorter service, who were serving under the ordinary conditions.

Officers.—The average strength of officers was 286, the attacks of illness numbered 274, the deaths and 293, officers were invalided. The ratios per 1,000 of strength were therefore 958·0, 10·49, and 101·40 respectively.

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Compared with the corresponding ratios in the preceding year an increase is observed in all, being 161·4 in cases of prevalence of sickness, '32 in that of mortality, and 33·61 per 1,000 in that of invaliding. Among the attacks of illness was 1 of small-pox, which recovered, 2 of measles, 4 of enteric fever, with 1 death, and 42 of simple continued fever, also with 1 death. Malarial fevers caused 43 illnesses, of which 5 were cases of remittent fever, and the remainder ague; from the latter one death is recorded. Dysentery caused 11 attacks of illness, none of which proved fatal. Disorders of the digestive system were the cause of 45 illnesses among which were 9 for hepatic diseases. Under none of the remaining orders of diseases were the attacks of illness very numerous, but 53 injuries are recorded; 17 bring contusions, 15 sprains, and 10 wounds. The causes of invaliding were simple continued fever 2 cases, enteric fever 2, dysentery 2, ague 3, debility 5, rheumatism 1, gastritis 1, dyspepsia 1, hepatitis 2, jaundice 1, deafness 1, and gunshot wounds in action 8 cases.

Women.—The average strength of women during the year was 887, and the number of admissions for sickness, exclusive of cases of child-birth, was 794, and the number of deaths were 11. The ratio of admission, therefore, was 895·2 per 1,000, being higher than that in the preceding year by 213·0; the death rate, however, 12·40 per 1,000 is fractionally less in comparison with that of 1885. Among the admissions were 45 for simple continued fever, but only 1 for enteric fever. Dysentery caused 17 admissions, and malarial fevers 57, of which 6 were cases of remittent fever and the remainder ague. One death occurred from dysentery and one from remittent fever. Septicæmia was the cause of three admissions, all of which proved fatal. The number of admissions for debility reached 234, and there were 11 admissions for rheumatism and 13 for tubercular disease of the lungs, three cases of which proved fatal. Among local diseases nervous affections, chiefly neuralgia, caused 11 admissions, diseases of the eye 22, mostly simple conjunctivitis, and diseases of the ear 7 cases. Affections of the circulatory system were infrequent, only 5 cases being recorded, but one was a fatal case of valve disease of the heart. Respiratory diseases were the cause of 37 admissions, mostly bronchial affections; and disorders of the digestive system numbered 139 admissions, of which 64 were cases of dyspepsia, 25 of diarrhoea, and 16 of hepatic affections, and there was one death from hepatitis. Diseases of the generative system caused 95 admissions; the diseases were numerous, a few admissions only being in most cases recorded for each; for abortion, however, 21 admissions are returned; there was also one death recorded under this order of diseases from metritis. In the remaining groups or orders of diseases there was no great amount of sickness.

Children.—The average strength of children was 1,777, and there were 1,406 admissions and 79 deaths. The ratio of admission, therefore, was 791·2 per 1,000, and that of mortality 44·45. Compared with corresponding ratios in the preceding year the admission rate has increased by 156·4, and the death rate by 12·59 per 1,000. Eruptive fevers caused 127 admissions, these comprised 3 for small-pox, 1 for cow-pox, 6 for chicken-pox, and 117 for measles; no death occurred. Enteric fever was the cause of three admissions, one of them fatal, and among 123 attacks of simple continued fever two proved fatal. The admissions for dysentery were 33 in number, for whooping cough 24, mumps 10, and diphtheria 1, which had a fatal termination. Malarial fevers caused 105 admissions; of these 15 with 4 deaths were for remittent fever, and the remainder, with one death, for ague. Under the head of debility 121 admissions and 11 deaths are returned, and there was one fatal case of immaturity at birth. Tubercular diseases were the cause of 15 admissions and 8 deaths. Among local diseases, affections of the nervous system caused 23 admissions and 12 deaths which were caused as follows: Infantile convulsions 8 cases, meningitis 2, and paralysis and tetanus 1 case each. Ophthalmic affections numbered 115 cases, mostly simple conjunctivitis. The admissions for respiratory diseases were numerous, 209 cases, but, except 16, were all bronchial affections; there were 6 deaths from bronchitis, 2 from croup, 2 from pneumonia, and 1 from pneumonic phthisis. Disorders of the digestive system caused 324 admissions; of these 190 were for diarrhoea and 75 for teething; from these two diseases there were also 25 deaths, 15 from the former and 10 from the latter. The admissions in the remaining orders of diseases were not numerous, except skin diseases, which showed 63.

There were also 37 admissions for injury; and two deaths from injury occurred, *Madras*. one from wound and one from drowning.

SANITARY CONDITIONS.—The Principal Medical Officer reports that the general health of the British troops in the Command was not satisfactory. There was a remarkable immunity from cholera and small-pox, only two cases of the former and one of the latter, but enteric fever increased very greatly, the admissions and deaths being nearly double those in the previous year. No new light, however, was thrown on the causation of this disease in the Command by the experience of the year under report.

With regard to the different administrative circles the following remarks are made:—

Eastern District.—At Fort St. George the sanitary condition of the barracks was satisfactory in respect of ventilation, superficial and cubic space, &c., but the floors were rather dilapidated and white-washing was required. At St. Thomas's Mount, Poonamallee, and Pallaveram the sanitary state of the building was satisfactory; but the constant arrival of sick from Burma caused much difficulty in arranging for their accommodation at Poonamallee. The accommodation at Fort St. George is said to be very limited and barely sufficient for the garrison, consequently some place of shelter for troops passing through Madras sufficient for the temporary accommodation of 100 men is urgently required. Of the station hospitals in this circle it is said that they are all suitable buildings with satisfactory sanitary conditions except in the case of the station hospital, Madras, of which it is said that its position is bad, owing to its proximity to the main road, while at the back of the grounds runs the river Cooum, which is a polluted stream during the greater part of the year. The ventilation of the lower wards is indifferent, owing to the existence of a wall in front. The water supply of Fort St. George and the station hospital was ample, but it is said that its quality as a drinking water was indifferent. At all other stations the water supply was good, ample, and properly protected. The canteen and coffee shops throughout the circle were satisfactory, with the exception that the canteen at Fort St. George is too small for the number of persons using it. The articles supplied gave rise to no complaint.

Bangalore and Ceded Districts.—The general health of the troops in this division was good. Of Wellington it is reported that a good sanitary condition of barracks has been maintained and there has been no overcrowding. Three rooms in the hospital were appropriated as special wards which were much required; this gives 10 extra beds; two lying-in wards are also in course of construction. During the hot weather and just after the arrival of convalescents from the plains it was necessary to supplement the accommodation in hospital by tents so as to prevent overcrowding. At Bangalore the troops obtain their water supply from the Ulsoor waterworks, a short distance to the north-east of the station. The water is pumped into large reservoirs and is distributed, after filtration at the waterworks, to barracks and hospitals in iron pipes. The senior medical officer, south station hospital, reports as follows on the Ulsoor tank, which is the chief source of water supply: The catchment or collecting ground is open to objections, the densely populated cantonment bazar is near the tank, and as the main feeding channel passes through the centre of that bazar to the tank it is liable to be fouled and polluted; besides, even after reaching the latter the water is polluted by people walking into it and washing their feet, clothes, utensils, &c., in it. However, every precaution was taken to supply the troops with pure water for drinking purposes; fuel was issued to barracks and hospitals, and the water, boiled under supervision, then passed through the Macnamara filters and distributed. The situation of the Ulsoor barracks is objectionable on account of its proximity to the native bazar, the sanitary condition of which is often doubtful. At Bellary the drainage is said to be still defective, owing to the almost dead level of the station, but certain defects in connexion with the drains at the western end of the barracks were brought to notice and remedied.

Belgaum and Western District.—The sanitary state of all barracks and subsidiary buildings in this circle was satisfactory. In Belgaum it would be impossible to improve the barracks and married quarters. In Malliappooram, owing to detachments passing through between Cannanore and Bepore, there

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was occasional discomfort from overcrowding, but now that there is only a detachment instead of a regiment at Cannanore this is not likely to occur again. The means for ablution and bathing are ample at all stations, and at Belgaum and Cannanore there are swimming baths. The latrine arrangements were good at all stations, except temporarily at Calicut until remedial measures were adopted. Ventilation, lighting, and general conservancy were all satisfactory in the hospitals of this circle. The rations were everywhere sufficient and of good quality. In Belgaum there was a good supply of European and country vegetables at moderate rates, and in the coast stations country vegetables were plentiful, and onions and potatoes were procurable, but at high rates. All the kitchens are large enough and provided with every necessary, though some improvement in the means of exit for smoke would be beneficial in some. Canteens were generally satisfactory, except at Malliapooram, where the roof is too low; the supplies were good. The water supply requires careful attention in all the stations, and Macnamara filters are in use throughout. In Belgaum and Cannanore the wells run down in dry weather, and the supply becomes somewhat scarce. At Calicut there is a large well that gives a plentiful supply but the water was thought to be suspicious on account of possibility of pollution from exposure, but the well has since been covered over and kept under lock and key. Another well was found on rough analysis to give better water than that above noted, a sample was therefore sent for further examination with a view of this water being taken into use. In all stations there are ample means, natural or artificial, for the removal to a distance of storm or refuse water.

Hyderabad Subsidiary Force.—The barracks generally are commodious and well situated, with the exception of the 2nd British Infantry barracks, which, though not unhealthy, are not so good as the others; they are nearest to Secunderabad and are not so open and airy as the others, and there is a good deal of rocky ground around them; also some wet cultivation. All the barracks are in a good state of repair and on the whole healthy and comfortable. The want of trees and shade is felt, particularly in the cavalry barracks; but this will be remedied in time by the growth of trees; which are being regularly planted in due season. The drainage of the barracks is chiefly by natural fall of ground assisted by some open masonry drains. This is sufficient to carry off rain water if hollows are filled up and care taken to secure slope away from the walls. The water supply is of excellent quality and plentiful. It is obtained from large wells situated at a distance from all chance of pollution and carefully covered over. The three station hospitals are reported as generally satisfactory, and are well supplied with good water. The hospital for women and children is not a very good one. The building was formerly used as married quarters and consequently is defective in many respects as a hospital. It is intended for the reception of the women and children of the artillery and infantry, those of the cavalry being treated in a small ward or section hospital near the barracks. Among various improvements which were carried out during the year were the provision of new punkahs in barracks, improving the light and ventilation of certain rooms in the central station hospital, alteration of reservoir for rain storage, provision of new stables, &c.

Nagpore Force.—The sanitary condition and lighting of barracks and hospitals were satisfactory, and no alterations were recommended or called for. There was an abundant supply of good filtered water always available for cooking and drinking, but the supply of water in the lavatories of the Kamptee barracks was rather limited. The conservancy of the barracks and hospitals was satisfactory and the establishment sufficient. Several improvements were effected during the year, among which were the construction of concrete drains from cook-house in infantry lines, and construction of gymnastic apparatus in artillery lines.

British Burmah Division.—Owing to the establishment at Rangoon of a general hospital for British troops in connexion with the Burma Field Force it became necessary to remove the station hospital from the new buildings to those which afforded it accommodation previously, while the former were being erected in 1884. The new buildings were capable, with some slight alterations and additions, of affording accommodation for 200 beds, and were in consequence much better adapted for the purposes of a general hospital

than any others existing at the station, while the barracks block and married quarters formerly used as station hospitals for males and females respectively again provided sufficient and good accommodation for this purpose. Owing to the great increase of sickness at Thayetmyo, resulting from the exposure and harassing duties devolving upon the various columns operating in the neighbourhood, an auxiliary ward was opened in an empty block of barracks in close proximity to the station hospital, and equipped from the store and establishment of the general hospital which existed in connexion with the Burma Field Force of 1885. With the exception of a railing which is required round the female hospital at T'oungoo and the want of quarters for the hospital servants at the same station, all buildings were well suited for their purpose, kept in excellent repair, and free from any insanitary condition. The water supply was everywhere abundant, of good quality, and carefully guarded from all known sources of contamination. Drainage and conservancy received everywhere the utmost attention, and was in no instance deemed defective. *Madras.*

Bombay.

III.—BOMBAY.

The average strength of warrant officers, non-commissioned officers, and men was 11,000; there were 16,368 admissions into hospital and 147 deaths, including those of 7 invalids after leaving the country, and 813·81 men were constantly sick. In the following table are shown the most important of the health statistics of the troops during the year:—

1886. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Constantly Sick.
11,000	16,36	140	7	147	309	121	813·81	1483·0	13·36	28·09	11·00	73·98

Comparing the ratios of admissions and constantly sick with those of the preceding year, an increase of 28·4 per 1,000 is observed in the former, and one of 6·98 in the latter; the ratio of mortality, however, in a similar comparison shows a considerable decrease, as much as 11·36 per 1,000. Compared with the corresponding average ratios for the preceding 10 years, a decline of 89·0 per 1,000, is observed in the admission ratio, one of 3·84 in the death rate, but an increase of 11·16 in that of constantly sick.

The average sick time to each soldier was 27·00 days, and the average duration of each case of sickness 18·15 days, which are longer than the corresponding periods in the preceding year by 2·54 days and 1·39 days, and than the similar decennial average periods by 4·07 days and 3·61 days respectively.

The loss to the Command by death and invaliding to England was 456 men, and the total loss to the service by death and final discharge by invaliding as medically unfit was 269 men, equal to a ratio of 24·45 per 1,000, considerably lower than that in the previous year.

In Abstract No. XXXI., is a table taken from the report of the Principal Medical Officer, Surgeon General W. A. Thomson, M.B., showing the admissions and deaths in the different circles and stations in the Command. In the Presidency circle the admission ratio was 1424·7, and the mortality rate 13·47 per 1,000, the former being higher by 353·7, and the latter almost the same as the corresponding ratio in the preceding year. In the Sind circle, on the other hand, the ratio of admission, 1638·9 per 1,000, has declined by 215·7, and the death ratio by 1·84 per 1,000. In the Poona circle also the ratios of admission and mortality, 1234·8 and 8·71 per 1,000, have declined, by 136·6 and 2·19 respectively. In the Mhow circle the admission ratio, 1782·4 per 1,000, is higher than in the preceding year by 330·7, and the death rate, 14·74, by ·76. The Quetta circle for the first three months of the year belonged to this Command, and gave for that period an annual ratio of admission, 1310·5 per 1,000, and of mortality, 19·94, which compare very favorably with the ratios for the preceding year. The admission ratio at the Sanitaria equalled 2120·8 per 1,000, and the death rate 12·50 per 1,000, the former being higher, but the latter considerably lower than in the previous year.

With regard to individual stations the highest ratio of admission was 2387·1 per 1,000 at Asirgarh, but the average strength was only 124, malarial fevers were the prevalent diseases, but were of a mild type. The next highest ratio was 2170·5 per 1,000 in Ahmedabad; this is higher than in the previous year by 399·1, and also a good deal above the decennial average rate, climatic fevers were the most frequent causes of admission; Neemuch shows a high rate of prevalence of sickness also, 1948·8 per 1,000, but it is lower than the corresponding rate in the previous year by 201·1, and also below the average.

The lowest ratio of admission was 1102·1 per 1,000 at Kirkee, which compares favorably with 1307·4 in the previous year, and with 1498·2, the average rate; next above comes 1140·2 per 1,000 at Aden; this differs by only a slight decrease from the previous year's ratio, but is a good deal above the average. At Poona the admission rate was 1241·1 per 1,000, which is a decrease from the previous year's rate by 117·9, and is below the average by 287·7.

Mortality was greatest at Ahmedabad, the ratio being 30·30 per 1,000 as compared with 8·16 in the previous year, and with an average rate of 18·03; at Deesa the next highest mortality ratio is found, 28·45, an increase of 4·47 on the foregoing year, but both these years are a good deal above the average; at Karachi the mortality rate was high, 21·30, but is fractionally below the last year's rate, though above the average. The lowest ratio of mortality was 3·87 per 1,000 at Ahmednagar, the ratio in the previous year being 2·18, both of which are below the decennial average rate; next above are 6·15 and 6·45 at Neemuch and Hyderabad respectively, both being below average rates as well as corresponding rates in the preceding year.

In Abstract XLV. there is a table taken from the report of the Principal Medical Officer showing the more important of the health statistics of the different corps which served in the Command during the year. First, with regard to the different arms of the service, it will be observed that the ratio of admission in the cavalry was 1800·8, in the artillery 1617·6, and in the infantry 1496·9. Compared with corresponding ratios in the preceding year there is an increase in the admission ratio for the cavalry equal to 579·3, and in that for the artillery one of 171·4, but there is a decline in the ratio for the infantry of 92·7 per 1,000. The mortality ratios were in the cavalry 10·59, in the artillery 14·65, and in the infantry 10·54 per 1,000; of these the cavalry ratio shows an increase of 3·88, but the other two have declined by 1·81 and 16·31 respectively. The ratio of constantly sick in the cavalry was high, 119·36 per 1,000, and was greater than in the previous year by 53·43; that for the artillery, 80·68, is greater by 15·17, but that for the infantry, 72·09, shows a fractional decrease. With regard to individual corps it will be noticed that there was only one cavalry regiment in the Command, the 7th Dragoon Guards, quartered at Mhow, the ratios given above for the cavalry are therefore those of this particular regiment. In the artillery, taking batteries whose average annual strength was over 100, the highest ratio of admission was 2389·7 per 1,000 in E Battery, 1st Brigade, quartered at Neemuch, followed by 2302·6 in D Battery, 2nd Brigade, at Ahmedabad; the lowest ratio was 1078·0 per 1,000 in I Battery, B Brigade, quartered at Kirkee. F Battery, 2nd Brigade, also quartered at Kirkee, being next above with 1088·6. The mortality ratio varied from 44·12 per 1,000 in A Battery, 2nd Brigade, stationed at Deesa, to *nil* in several batteries. The highest ratio of constant inefficiency through sickness, 118·97 per 1,000, was in the battery with the highest admission rate, E Battery, 1st Brigade, and D Battery, 2nd Brigade, also had a high rate, 102·30, as well as G Battery, B Brigade, at Mhow, 112·17; the lowest ratios were 51·14 and 51·28 per 1,000 in F Battery, 2nd Brigade, and I Battery, B Brigade, respectively. In the infantry the highest admission ratio in any regiment occurred in the 1st Battalion, Oxford Light Infantry, 1844·8 per 1,000, at Poona and Quetta; the next ratio was 1781·9 in the 2nd Battalion, North Stafford Regiment, at Aden and Mhow; the lowest admission ratio was 982·4 per 1,000 in the 2nd Battalion, Dorsetshire Regiment, quartered at Aden, the next above being 1001·4 in the 2nd Battalion, Royal Dublin Fusiliers, at Poona. The highest ratios of mortality were 19·16 and 19·05 per 1,000 respectively in the 1st Battalion, Loyal North Lancashire Regiment, and the 2nd Battalion, Royal Lancaster Regiment, but the average annual strength of both these corps was small; the lowest death rate was 3·74 per 1,000 in the 2nd Battalion, Lancashire Fusiliers, quartered at Nasirabad, the next rate, 4·54, in the 2nd Battalion, Gloucestershire Regiment, at Ahmednagar. The amount of inefficiency through sickness in the infantry was highest in the 2nd Battalion, North Staffordshire Regiment, 93·84 per 1,000, and next in the 1st Battalion, Worcestershire Regiment, quartered at Karachi, 87·44; the lowest ratio of constantly sick was 31·83 in the 2nd Battalion, Dorsetshire Regiment, and the next 44·37 in the 1st Battalion, Loyal North Lancashire Regiment.

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With regard to the influence of age and length of service in the country on sickness and mortality certain calculations have been made, the results of which are given in the following tables :—

TABLE showing the Influence of Age on the Sickness, Mortality, and Invaliding among the Troops in the Bombay Command during the year 1886.

Ages.	Average Strength.	Admissions.	Deaths.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years - -	419	445	5	10	1062·0	11·93	23·87
From 20 to 24 years -	4,952	9,045	78	133	1826·5	15·75	26·86
" 25 " 29 " -	5,030	5,210	33	104	1719·5	10·89	34·32
" 30 " 34 " -	1,101	1,121	11	30	941·2	9·24	25·19
" 35 " 39 " -	470	442	12	26	940·4	25·53	55·32
40 years and upwards -	110	102	1	7	927·3	9·09	63·64
Not stated - - -	828	3	—	—	—	—	—
Total - - -	11,000	16,368	140	310	1488·0	13·36	28·18

From the above it will be observed that the ratio of admission among men under 20 years of age was 1062·0 per 1,000, that between 20 and 25 years of age the rate increased greatly and reached 1826·5; in the next quinquennial period the admission rate was a little lower though still high, but after this period it fell again rapidly. Mortality, which was 11·93 per 1,000 among men under 20 years of age, rose to 15·75 among men between 20 and 25 years of age, but fell again in the next two quinquennial periods, rising again in the following one. It must be mentioned, however, that these ratios, as well as those in the succeeding table, are not absolutely accurate in their relation to the total strength in the Command on account of the number of instances in which particulars of age and service were not available; but they are given as being sufficiently approximate to convey a general idea of the influence of age and service on sickness.

TABLE showing the Influence of the Length of Service in the Country on the Sickness, Mortality, and Invaliding among the Troops in the Bombay Command in the year 1886.

Years of Service.	Average Strength.	Admissions.	Deaths.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year - -	1,800	4,176	45	76	2320·0	25·00	42·23
From 1 to 2 years -	1,463	2,026	25	35	1384·9	17·09	23·92
" 2 " 3 " -	1,977	2,878	19	71	1455·7	9·61	35·91
" 3 " 4 " -	1,270	2,176	6	29	1713·4	4·72	22·05
" 4 " 5 " -	1,342	2,010	12	21	1497·8	8·94	15·65
" 5 " 6 " -	695	1,141	7	19	1641·7	10·07	27·34
" 6 " 7 " -	410	632	6	14	1508·3	14·32	33·41
" 7 " 8 " -	286	479	6	13	1674·8	20·98	45·45
" 8 " 9 " -	198	274	2	5	1383·9	10·10	25·23
" 9 " 10 " -	203	151	1	4	743·8	4·93	19·70
" 10 upwards -	514	424	11	24	824·9	21·35	46·70
Not stated - - -	833	1	—	—	—	—	—
Total - - -	11,000	16,369	140	310	1488·0	13·36	28·18

These figures show that the greatest amount of sickness occurred among men in their first year of service in the country, the ratio 23·20 per 1,000 being the highest; in the second and third year of service the ratio fell considerably, rising again in the fourth year. From the fifth to the eighth year of service the admission ratios do not vary very greatly, but after the latter year they declined. Mortality also was greatest among men in their first year of service, the ratio being 25·00 per 1,000; in the second year of service it declined a good deal, and was still further decreased up to the fourth year of service. After that period of service the ratio gradually increased up to the eighth year of service and then fell off again, but the numbers on which the ratios of the later years of service are founded are very small.

The admissions, deaths, invaliding, &c. in the different groups, sub-groups, and orders of diseases are given in Abstract XXX., and the relative prevalence of sickness and mortality from them in each of the administrative circles is shown in the tables given in Abstract XXXII.

GENERAL DISEASES.—Diseases dependent on Morbid Poisons.—In the first sub-group of this group of specific febrile diseases, *eruptive fevers* show 8 admissions, or 7 per 1,000; in the preceding year the ratio was 8; among the admissions were two for small-pox, one case occurring at Neemuch, and one at Ahmedabad; there were also two admissions for cow-pox, three for measles, and one for epidemic rose-rash at Colaba, which proved fatal.

Enteric Fever caused 134 admissions and 46 deaths, being in the ratios of 12·2 and 4·18 per 1,000; in the preceding year there were 88 cases and 30 deaths. Compared with the corresponding ratios in the previous year the admission ratio is greater by 4·6 and the death rate by 1·61 per 1,000; and in comparison with similar average rates for the preceding five years the increase in admission ratio is equal to 6·2, and in mortality ratio by 2·23 per 1,000. The ratio of mortality to attack was the same as in the previous year, 34 per cent. In Abstract No. XXXIII. is a table, taken from the report of the Principal Medical Officer, showing the stations at which the admissions and deaths from enteric fever occurred in each quarter of the year. The greatest prevalence of this disease was in the third quarter, 62 cases, followed by the second quarter, 28 cases, then the fourth quarter, 25 cases, and, lastly, the first quarter, 19 cases. Mortality was not quite in the same order of prevalence, the greatest being 21 cases in the third quarter, next 11 cases in the fourth quarter, then 10 cases in the second, and, lastly, 4 cases in the first quarter.

In a special report on enteric fever among British troops in the Command during the year submitted to the Government, the Principal Medical Officer remarks that "to whatever causes it may be due there can be no doubt as to the fact, judging from the number of cases recorded, that to this disease is owing a large amount of inefficiency and mortality in the army. But whether the whole of this is due to an actual increase in the prevalence of disease is not, I think, quite clear, for, as was shown in last year's report, many of the milder cases ending in recovery may have been recorded as cases of simple continued or remittent fever, and this is not to be wondered at when the difficulty of diagnosis and the abortive nature of some of these cases are considered."

The Principal Medical Officer gives a table showing the relative frequency of enteric fever at different stations in the Command during the last five years, from which, and from the table before mentioned, it is seen that "enteric fever prevailed in the past year at all stations in the Command, except Aden, Asirgarh, Satara, Indore, and Taragarh. At Aden no case has occurred in the past three years, and only one death since 1882 inclusive. Satara seems hitherto to have been free from the disease; Asirgarh to have had one case and no death in the past five years; Indore five cases with two deaths, and Taragarh three cases and no deaths during the same period." It is shown also that "the stations at which this disease has been most prevalent have, relatively to each other, maintained their evil repute. Last year the order of prevalence was Karachi, Deesa, Nasirabad, Poona, and Mhow, and this year they maintain the same order, strongly accentuated by the greater number of admissions and deaths at each. But the total increase is not confined to these stations."

The greatest number of attacks in any one station was 33 at Karachi, among them were five deaths. In the previous year there were 19 cases and 4 deaths.

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The admissions were fairly distributed throughout the year, but attained a maximum in the months of August and September, and all the deaths and 70 per cent. of the admissions took place in the last half of the year, principally July to October inclusive. "With regard to the influence of age it appears that the admission ratio was 46·5 per 1,000 for men under 20, 42·5 between 20 and 24, and 51·1 between 25 and 29, but it must be remarked that the average strength of men for the latter period was much smaller than the other two combined, and consequently the ratio is less reliable. As to length of service in India nearly one half the cases were men in their first year, and 85 per cent. of the whole had been under four years in India." With regard to the causation of the disease, it is said that no defects were found in the barracks or their surroundings, or in the food or manner of dealing with it, to account for the disease; but it is added that much remains to be done to perfect the sanitation of Karachi city and cantonment.

The returns for Deesa show the highest number of deaths, and, with the exception of Mhow, the highest death rate from this disease. There were 27 attacks and 10 deaths in an average strength of 457. Of the 27 cases 7 and 2 deaths occurred in the first half, and 20 cases and 8 deaths in the second half of the year, but nearly a third of the cases and almost half of the deaths took place in the month of September. One third of the cases occurred in men under 23 years of age, and 20 men out of the total of 27 cases had been under 19 months in India; of these no less than 16 had served in the country under 8 months, the average being only 5. No sanitary defect was discovered, and every possible precaution was taken without any appreciable effect in the prevalence of disease. At Nasirabad there were 20 admissions and 5 deaths, the attacks being twice as numerous as in the previous year. The Principal Medical Officer of the circle remarks that it is difficult, if not impossible, to assign cause for the prevalence of the disease at Nasirabad, that great care is taken of the drinking water, which is fairly good, if not of a high standard of purity, that there does not appear to be any suspicion regarding the milk, and that the sanitary state of the station is very complete. In Poona there were 13 admissions and 5 deaths from enteric fever. Of the admissions 9 came from the Wanowri Barracks and 4 from the Ghorpuri Barracks; one of the former, however, was admitted the day after his arrival from Egypt. As to age, eight men were 21 years and under, and all except two were under 23. Eight of the 13 men had less than six, and 10 less than 12 months' service in India. No particular insanitary state of the barracks or their surroundings was discovered, and the cases were distributed pretty evenly throughout the year. At Mhow there were 11 cases and 8 deaths, and one half the cases occurred in the second quarter, the hottest season of the year. Seven of the men were under 22 years of age, and the remaining four between that and 25 years. In two cases the men had been three years in India, the others were all in their first year of service in the country. With regard to the etiology of the disease, it is said that in not a single instance could any special condition be found which did not affect the troops generally. The great point of agreement in all cases was the youth of the subject. At Colaba there were 6 cases and 2 deaths, half the cases and one death occurred in the month of March. No specific cause of disease was discovered. There was a very heavy rainfall, but all the cases except one occurred before the setting in of the rains. There were 5 admissions and 2 deaths at Deolali, but it is believed that the whole of the cases were imported into the station. At Kirkee there were 5 cases and 2 deaths, and the subjects were young men of very short service in India. At Ahmednagar also 5 cases and 2 deaths were recorded; it is stated that no cause whatever was discovered to account for them. At Ahmedabad 4 cases and 3 deaths were returned; but it is remarked that the diagnosis of two of the cases was somewhat doubtful. There were two cases, one fatal, at Hyderabad, for which no cause could be traced. At Neemuch and Mount Aboe there was one case respectively, and there was also one at Quetta in the three months that station still belonged to the Bombay Command. The Principal Medical Officer in a summary of his report, remarks that "the results of the year confirm those of previous years, that the younger the soldier and the shorter his service in India, the greater are his chances of an attack of enteric fever, and there can, I think, be no doubt that when the two are combined these chances are considerably enhanced."

Other Continued Fevers caused 1,128 admissions and 3 deaths, being in the ratios of 102·5 and ·27 per 1,000 respectively, which are below the corresponding ratios in the preceding year by 11·3 and ·07, and below the similar average ratios for the preceding five years by 8·0 and ·02 respectively. The ratio of constant inefficiency from sickness from these fevers was 3·67 per 1,000, which is rather above the average rate. Three deaths from simple continued fever occurred, two at Kirkee and one at Poona. With regard to the different administrative circles it is seen that in the Presidency circle the admission rate, 117·4 per 1,000, exceeds that of the preceding year by 7·5, but the death rate was *nil* against ·38 in 1885. In the Sind district the admission rate presents a large decrease, 181·7, the ratio per 1,000 of strength having fallen from 329·8 to 148·1 during the year under report. The death rate was *nil* in both years. The Poona division shows a decrease in the admission and death rates, 65·7 and ·38 respectively. In the Mhow division the admission rate of the previous year, 41·9, rose to 95·9 during the year. The ratio of admission in the Sanitaria was 116·6 per 1,000, being an increase of 12·2 on the corresponding rate in the previous year.

Cholera caused only 4 admissions and 4 deaths; in the previous year there were 131 cases and 85 deaths. Abstract No. XXXIV. shows the stations at which these admissions and deaths took place in each quarter of the year. In the fourth quarter there were two fatal cases, in the first quarter one admission and two deaths, in the third quarter one admission, which recovered, and in the second quarter no cases. Two of the cases occurred at Deolali in October, in young soldiers recently disembarked from a troopship from England. It was difficult to trace the exact cause of these cases, and the conditions under which these men were did not differ from those of others; it is said, however, that both these men had been indulging freely in fruit and nuts. At Quetta during the first three months of the year there was one fatal case. At Indore there was one case, which recovered. The origin of the case could not be traced, and the man had not been near any place where cholera existed. The death from cholera at Karachi was that of a man who had been admitted on the last day of the previous year. There were no fresh cases in the year under report.

Dysentery was the cause of 250 admissions and 7 deaths, being in the ratios of 22·7 and ·64 per 1,000 as compared with 28·4 and 2·89 per 1,000 in the preceding year. In Abstract XXXV. is a table in which the prevalence of dysentery in each division of the Command is shown, and in Abstract XXXVI., a table which shows the prevalence and mortality of this disease in each quarter of the year. In the Presidency circle the ratio of admission was 25·0 and that of mortality ·96 per 1,000, having increased by 2·4 and ·59 respectively. In the Sind district the rate of prevalence was 66·4 as compared with 33·7 per 1,000, and the rate of mortality 3·05 as compared with 3·28. In the Poona division the rate of admission fell from 18·1 to 16·2 in the year under report, and the death rate from ·86 to *nil*. In the Mhow division the ratio of admissions was 15·0, a decrease of 7·2, while the death rate, ·29, decreased by ·02. The greatest seasonal prevalence of dysentery was in the third quarter of the year, the rate being 8·7 per 1,000; next comes the fourth quarter with 6·4, followed by 4·1 in the first quarter, and 3·5 in the second quarter. Mortality was in the same order, being greatest in the third quarter, ·28 per 1,000, next in the fourth quarter, ·26, followed by ·09 in the first, and *nil* in the second.

Malarial Fevers.—The admissions in this sub-group of diseases numbered 4,062, and there was one death. The ratio of admission was 369·3 per 1,000, which is lower than that of the preceding year by 81·0, and than the corresponding average rate for the preceding five years by 88·7 per 1,000. The mortality ratio, ·09 per 1,000 is considerably lower in both these comparisons. The ratio of constant inefficiency on account of these fevers was 11·07 per 1,000. This is lower than in the preceding year by 3·23, and than the quinquennial average by 1·92. Of the cases 3,945 were ague and 117 remittent fever; one death occurred from the latter disease at Quetta. With regard to the prevalence of malarial fevers in the different administrative circles, excluding Quetta, which was only three months in the Bombay Command, the highest ratio was 483·7 per 1,000 in the Mhow division, followed by 430·5 in the Sind division. The ratios in the Poona and Presidency circles

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were a good deal lower, being 285·4 and 224·1 respectively. Compared with corresponding ratios in the preceding year the ratios of prevalence of malarial fevers have increased by 82·9 in the Presidency circle, and by 58·7 in the Mhow circle; but in the Sind and Poona divisions the ratios have declined by 134·9 and 59·4 respectively. With regard to Sanitaria it is observed that the ratio of admission reached 858·2 per 1,000, an increase of 440·6 on the preceding year.

The sub-group of *septic diseases* was represented by 7 admissions; all were cases of erysipelas, which recovered.

In sub-group IV., venereal affections, are recorded 1,188 admissions for *primary syphilis*, being in the ratio of 108·0 per 1,000. This is higher than the ratio for primary syphilis in the preceding year by 9·3, and does not include, as the latter did, the admissions for simple venereal ulcers. If these were added it would raise the admission ratio to 135·7 per 1,000, and the increase over the last year's rate would be 37·0, and that over the quinquennial average rate 54·3. The ratio constantly sick in the same manner was 8·22 per 1,000, and was higher than that recorded in the previous year by 1·52; and if the ratio of constant inefficiency from simple venereal ulcers be added, it would amount to 9·60 per 1,000, and the increase be equal to 2·90 over the previous year, and 3·77 above the average.

With regard to the prevalence of primary syphilis in the different districts it is observed that the highest ratio of admission was 152·0 per 1,000 in the Mhow circle, the Sind circle being just below with 150·4, in the Presidency circle the rate of prevalence was 101·5, and in that of Poona only 62·8. The ratio in the Sanitaria was 62·5. *Secondary syphilis* caused 369 admissions, equal to a ratio of 33·6 per 1,000, which is higher than the corresponding ratio in the preceding year by 8·7, and than the quinquennial average rate by 11·5. The ratio constantly sick was 2·87 per 1,000, as compared with 2·27 in the previous year, and with an average rate for five years of 1·85. With regard to prevalence in the different districts, the highest ratio was 46·8 per 1,000 in the Mhow circle, next 37·4 in Sind, followed by 30·3 in the Presidency, and lowest 23·3 in the Poona circle. *Gonorrhœa* was the cause of 1,669 admissions, the ratio per 1,000 being 151·7, as compared with 119 in the preceding year, and with 118·1, the average rate. The rate of constant inefficiency, 9·99 per 1,000, is higher than in the previous year by 2·55, and than the average rate by about the same. *Gonorrhœa* was most prevalent in the Sind circle, the rate being 183·2 per 1,000, next in the Mhow district, 181·2, then in the Poona circle, 142·1, and lastly in the Presidency, 135·6.

Including all forms of venereal affection, the total admission ratio reached 321·0 per 1,000, and the total rate of constant inefficiency on account of these diseases 22·46 per 1,000, the former being higher than the corresponding ratio in the previous year by 78·4, and the latter by 6·05 per 1,000, while both ratios are considerably above the average ratios for the preceding five years.

In the different districts the greatest prevalence of venereal affections occurred in the Mhow circle, the ratio, excluding simple venereal ulcers, being 380·0 per 1,000, the Sind circle was close behind with 371·0, followed by 267·4 in the Presidency and 228·2 in the Poona circle. The admission ratio at the Sanitaria was 237·5 per 1,000.

In the last sub-group of this group of diseases are recorded two fatal cases of *hydrophobia*. One occurred at Nasirabad in the person of a driver who had been bitten a month previous to the attack; the other occurred at Indore in a private soldier; but regarding this case no certain history could be traced of a bite by a mad dog.

In the next group of diseases *parasitic* affections caused 61 admissions, equal to a ratio of 5·5 per 1,000. These affections were most prevalent in the Presidency and least in the Sind circle. Five sixths of the admissions were cases of *tœnia solium*. *Scurvy* caused 26 admissions, equal to 2·4 per 1,000, which is above the average but slightly below the rate in the preceding year. A case or two occurred in each of the administrative circles, but most of the cases happened in Poona in a draft of men recently disembarked from on board ship, but lime juice and fresh vegetables soon counteracted the scorbutic tendency. *Alcoholism* caused 101 admissions and 3 deaths, being in the ratios of 9·2 and 27 per 1,000, which scarcely differ from the corresponding ratios

in the preceding year. The cases are returned as alcoholism, 91 cases and 2 deaths, and delirium tremens 10 cases and 1 death. Alcoholism was most frequent in the Presidency circle (excepting the Quetta circle during the first three months of the year), the ratio of admission being 23·6 per 1,000, in the Sind circle the rate was 13·0, and in the Poona and Mhow circles 3·4 and 3·7 per 1,000 respectively.

Under the head of *debility* 427 admissions are returned, being at the rate of 38·8 per 1,000, which is about the average rate, though higher by 4·2 than that of the previous year. The ratios in the Presidency circle was 58·2 per 1,000, that of Sind 25·1, Poona and Mhow circles being intermediate, 31·4 and 32·6 respectively. The ratio at the Sanitaria was high, 91·6 per 1,000.

In the group of general diseases which are not classified *rheumatism* caused 329 admissions and 3 deaths, being in the ratios of 29·9 and 27 per 1,000; in the previous year the admission ratio was 27·3 but there was no death, and there is but little difference as compared with the average rate of prevalence. Of the total number of admissions 18 were cases of rheumatic fever, from which also all the deaths occurred. Among the different districts rheumatic affections were most prevalent in the Mhow circle, the ratio being 42·8 per 1,000, which is an increase of 11·0; in the Presidency the ratio was 30·3, an increase of 5·4; in Poona 21·1, greater by 6, and in Sind 16·0, an increase of 3·0. In the Sanitaria the admission ratio was 54·1 per 1,000.

Tubercular diseases were the cause of 69 admissions and 11 deaths, including those of 4 invalids. The admission ratio, 6·3 per 1,000, and the death ratio, 1·00, are lower than the corresponding ratios in the previous year by 1·7 and 29 per 1,000 respectively, but the decrease is doubtless in some measure due to the alteration in registration of cases of phthisis pulmonalis according to the new nomenclature. Most of the cases and all the deaths were due to tubercular disease of the lung. By far the greatest prevalence of tubercular affections occurred in the Presidency circle, the ratio being 19·7 per 1,000; from this to the next ratio in order, that of Poona 5·2, there is a considerable decline, followed by 3·0 in the Sind circle, and 1·7 in that of Mhow.

Other diseases of this group numbered 224 admissions, or 20·4 per 1,000. The majority of the cases, 169, were non-malignant tumors or growths, and there were 49 cases of anæmia, 3 of scrofula, and 2 of cancer, of which one proved fatal; there was also one case of diabetes mellitus, which also terminated fatally.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 181 admissions and 1 death, equal to 16·4 and 09 per 1,000 respectively. Thirty of the admissions, or 2·7 per 1,000, were cases of mental disease. The ratio of admission for these affections is lower than in the preceding year, and is below the average rate, but it must be remembered that certain affections, such as sunstroke, are no longer returned under this head, consequently the ratio is lowered to some extent on this account. The highest ratio of prevalence of nervous diseases in any circle was 31·7 in the Presidency, as was also the case in the previous year; the least prevalence was in the Sind district, 3·8, Mhow having a rate of 12·1 and the Poona circle one of 7·8 per 1,000. Mental affections gave a ratio of 9·1 per 1,000 in the Presidency circle, 2·2 in the Poona circle, and 1·1 in that of Mhow, and *nil* in Sind. Among the admissions, besides the 30 for mental disease already mentioned, were 92 for neuralgia, 26 for epilepsy, 13 for paralysis, &c. One death occurred from meningitis.

Diseases of the Eye caused 186 admissions, or 16·9 per 1,000, which is above the ratio in the preceding year by 4·4, and is also above the average rate. As in the previous year also the greatest prevalence of ophthalmic affections was in the Poona circle, where the ratio was 25·5. Of the total number of admissions 143 were cases of conjunctivitis, the remainder being for various affections.

Diseases of other organs of special sense with 182 admissions gave a ratio of 16·5 per 1,000; this is higher than the average rate as well as above the rate in the preceding year. Out of 175 cases of aural affection 137 were cases of inflammation of the external meatus. These affections were most prevalent in the Presidency and Poona circles.

Diseases of the Circulatory System caused 220 admissions and 5 deaths, being in the ratios of 20·0 and 46 per 1,000, respectively. The admission ratio

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is above the average, and is higher than the rate in the foregoing year by 4·3. The mortality rate is about the average though higher than in the previous year. Affections of the circulatory system were most prevalent in the Presidency circle, the ratio being 41·4, and least in the Sind division, where the rate was only 6·1. In the Mhow and Poona circles the rates were 22·0 and 13·7 per 1,000 respectively. Compared with the previous year these diseases were less prevalent in the Sind district, but more so in the remainder. The ratio at the Sanitaria, 16·7, has fallen by 5·3. Among the cases treated were 154 of palpitation, 48, with 4 deaths, of valvular disease of the heart, and 3 of aneurysm of the aorta, one of which was fatal.

Diseases of the Respiratory System show a ratio of admission of 37·6 and one of mortality of ·73 per 1,000, dependent on 414 admissions and 8 deaths. The admission ratio is below the average rate, and is also below that of the previous year by 3·3 per 1,000. Mortality was lower in both these comparisons; excluding Quetta, these affections were most prevalent in the Poona circle, the ratio being 37·0 per 1,000, but the rates in the Mhow and Presidency circles are not much below this, and that in Sind reached 29·8. In the Sanitaria the admission rate was 62·5. In the Sind district there was a decrease of prevalence as compared with the preceding year, but there was an increase in the remaining circles. More than three fourths of the admissions were bronchial affections, and among the others were 35 of pneumonia, and 14 of pleurisy. The deaths were due to pneumonia in 4 cases, pneumonic phthisis in 3, and pulmonary apoplexy in one case.

Diseases of the Digestive System caused 1,686 admissions and 18 deaths, including 2 of invalids, being in the ratios of 153·3 and 1·64 per 1,000 respectively. These ratios are both a good deal below those recorded in the previous year and below the average rates, but it must be borne in mind that in the year under report the admissions for dysentery, as well as some other affections, are not recorded under this head, but even if they still were so recorded, the ratios would be to some extent favourable in these comparisons. The greatest prevalence of these affections was in the Mhow circle, 194·2 per 1,000, followed by the Presidency with 155·4, then the Poona circle, 136·2, and lastly the Sind division, 113·0. Mortality was greatest (except in Quetta) in the Presidency circle, 1·92 per 1,000, then 1·53 in the Sind circle, 1·24 in that of Poona, and ·87 in that of Mhow. The admission and mortality ratios at the Sanitaria were 233·3 and 8·32 per 1,000 respectively. The principal causes of admission were diarrhoea 503 cases, dyspepsia 357, affections of the mouth and throat 342, and hepatic diseases 231 cases, including 22 of abscess of the liver. The causes of death were abscess of the liver 12 cases, hepatitis 2, and acute yellow atrophy of the liver, peritonitis, enteritis, and stricture of the pylorus one case respectively.

In a table taken from the report of the Principal Medical Officer, given in Abstract XXXV., is shown the prevalence of diarrhoea and hepatitis in each of the administrative circles, and in a table in Abstract XXXVI. is shown the prevalence and mortality from these diseases in each quarter of the year. The ratio of admission for diarrhoea was 45·7 per 1,000, which compares favorably with the corresponding rate in the previous year. The highest ratio of prevalence was 63·3 per 1,000 in the Mhow circle, and the lowest 34·6 in the Presidency, and the rates in the Sind and Poona circles were 44·2 and 41·0 respectively. Diarrhoea was most prevalent in the third and second quarters of the year, the ratios per 1,000 being 15·9 and 14·8 respectively, and least so in the fourth and first quarters of the year, when the respective ratios were 9·5 and 6·8. Hepatitis and abscess of the liver were in a ratio of admission of 13·3, and in a ratio of mortality of 1·18 per 1,000, as compared with 16·3 and ·70 per 1,000 in the previous year. The greatest prevalence of hepatic diseases in any circle was in the Presidency, the ratio being 18·7, and the least (excepting Quetta) in Sind 9·2 per 1,000. The ratios for Poona and Mhow were 14·3 and 13·3 respectively. Mortality was greatest in the Sind district, 1·53 per 1,000, followed by 1·24 and 1·15 in Poona and Mhow respectively, the lowest rate being ·96 in the Presidency. With regard to seasonal prevalence the highest ratio 4·7 was in the fourth quarter, followed by the third quarter with 4·0. The lowest ratio was 2·0 in the first quarter,

the next above being 2·5 in the second quarter. Mortality varied from ·47 *Bombay*. per 1,000 in the third quarter to ·02 in the second quarter.

Diseases of the Lymphatic and Glandular System caused 275 admissions and one death. The admission ratio was 25·0 per 1,000, which is above the average rate of similar affections, and above the ratio with which it corresponds in the preceding year. These affections were most prevalent in the Sind district, with a ratio of 33·6 per 1,000, next in the Mhow circle 33·5, and lowest in the Poona circle 14·9. The admission rate in the Sanitaria was 75·0 per 1,000; 187 of the admissions were for affections of the inguinal glands, and there were 37 admissions for diseases of the spleen. There was one fatal case of Addison's disease.

Diseases of the Urinary System show only 35 admissions and 2 deaths, including one of an invalid, being in the ratios of 3·2 and ·18 per 1,000. These ratios are not comparable with those of previous years on account of changes in registration of disease under the new nomenclature. Among the cases were 11 of cystitis, 7 of nephritis, and 4 of Bright's disease, from which there were 2 deaths, one being in an invalid.

Diseases of the Generative System give a high admission ratio, 57·0 per 1,000, due to simple venereal ulcers, as well as other diseases, formerly returned elsewhere, being shown under this head. The admissions for simple venereal ulcer numbered 305, and among the remainder were 130 cases of balanitis, 94 of orchitis, and 60 of urethral stricture.

Diseases of the Organs of Locomotion, with 74 admissions, caused a ratio of 6·7 per 1,000, which differs but little from that in the preceding year, though slightly above the average. More than half the admissions were cases of synovitis.

Diseases of the Connective Tissue were the cause of 267 admissions, or 24·3 per 1,000, which is a higher ratio than in the previous year, and is also above the average.

Diseases of the Skin.—Under this head 741 admissions are returned, being in the ratio of 67·4 per 1,000, which is almost identical with the corresponding rate in the previous year, both being somewhat below the average rate. As in the preceding year, cutaneous affections were by far the most prevalent in the Sind circle, the ratio reaching 108·4 per 1,000. The least prevalence was in the Poona circle, the Presidency and Mhow circles being intermediate with ratios of 76·0 and 72·0 respectively. Considerably more than half the admissions were due to ulcers, boils, and whitlows.

Poisons.—Under this head only 4 admissions are returned, two of which were cases of scorpion sting, and two of poisonous fish. One death took place from eating poisonous oysters.

Injuries.—The ratio of admission for injuries was 127·1 per 1,000, and the death rate 2·54, as compared with 118·9 and 1·72 in the previous year. The admissions for general injuries were 39 in number and 12 deaths. These numbers seem to compare unfavorably with those in the preceding year, 4 and 5 respectively, but the increase is really due to the alteration of registration of diseases, for 37 of the admissions and 10 of the deaths were due to sunstroke or heat apoplexy. The remaining two admissions were cases of burn, and the deaths were due one to drowning, accidental, and one to hanging, suicidal, while in a condition of temporary insanity, no motive could be assigned for the act. Local injuries caused 1,359 admissions and 16 deaths. Contusions, wounds, and sprains were the causes of five sixths of the admissions, and among the remainder the most frequent injuries were fractures 69 cases, dislocations 17, burns and scalds 12, and concussion of the brain 7 cases. The deaths were caused as follows: 7 from gunshot wound, 5 from fracture of the skull, 2 from contusion with rupture of viscera, one from fracture of the femur, and one from dislocation of the spine. Of the deaths by gunshot wound six were suicidal; in five cases in a state of temporary insanity, but in the sixth case a verdict of suicide was returned. In four cases no motive for the act could be assigned, though in one the man is said to have been drinking hard. The remaining death by gunshot wound was a case of homicide which occurred at Nasirabad, a private soldier shooting a man of the same regiment. The deaths from fracture were all the result of accidental falls, as also the deaths from contusion with rupture of viscera, and that from dislocation of the spine.

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The surgical operations performed during the year were chiefly of a minor character, and gave successful results; but there was one case of aspiration of abscess of the liver, which had a fatal termination.

Invaliding.—The number of men sent home as invalids during the year was 309, being in the ratio of 28·09 per 1,000 of the strength as compared with 29·01 in the preceding year, and with 44·59 the average rate for the preceding decennial period. The ratios of invaliding in the different arms of the service were 52·97 per 1,000 in the cavalry, 40·68 in the artillery, and 22·78 per 1,000 in the infantry; compared with corresponding ratios in the preceding year an increase of 14·94 per 1,000 has taken place in the cavalry ratio, one of 1·32 in the artillery, and a decrease of 2·93 in the infantry. Of individual corps, in the one regiment of cavalry, the 7th Dragoon Guards, quartered at Mhow, the invaliding rate is that given above. In the artillery among the batteries with average annual strength of 100 men the highest ratio of invaliding is observed in the 1st Battery, 1st Brigade, Scottish Division, 63·64 per 1,000; the battery was quartered for 11 months of the year at Colaba; the next ratio being 61·95 in 5th Battery, 1st Brigade, North Irish Division, quartered part of the time at Colaba and the rest at Aden; in T Battery, 1st Brigade, chiefly at Hyderabad, there was no invaliding; and C Battery, 2nd Brigade, at Karachi, only a ratio of 6·80 per 1,000. In the infantry regiments the highest invaliding ratios were 76·33 and 57·14 per 1,000 in the 1st Battalion, Worcestershire, and the 2nd Battalion, Royal Lancaster, respectively, and the lowest ratios were 7·66 per 1,000 in the 1st Battalion, Loyal North Lancashire Regiment, and 11·22 in the 2nd Battalion, Lancashire Fusiliers, at Nasirabad. The influence of age and length of service on invaliding during the year is shown in the tables given above. It will be noticed that the ratio of invaliding per 1,000 of strength was for men under 20 years of age, 23·87; for men between 20 and 25 years of age it increases to 26·86, for men in the next quinquennium it further increases to 34·32, dropping between 30 and 35 years, but rising again rapidly after that age. The ratio of invaliding among men under one year's service in the country was 42·22 per 1,000, in the second year it fell to 23·92, and increased in the third year of service to 35·91. In the fourth and fifth years of service the invaliding ratio was low, after which it gradually increased with length of service up to the eighth year of service.

The principal causes of invaliding to England were dysentery 12 cases, or 1·09 per 1,000; malarial fevers 13 cases, or 1·18, an increase on the ratio in the previous year; secondary syphilis also 13 cases; debility 64 cases, or 5·82 per 1,000, as compared with 6·69 in the preceding year; rheumatism 14 cases, or 1·27; tubercular diseases 18, or 1·64 per 1,000. Among local diseases affections of the nervous system caused the invaliding of 26 men, or 2·37 per 1,000, among these were 9 cases of mental disease; 36 men were invalidated for diseases of the circulatory system, or 3·27 per 1,000, as compared with 2·92 in the previous year; 13 men for respiratory affections, or 1·18, a marked increase; and 22 for digestive disorders, equal to 2·00 per 1,000 as compared with 4·98; in the remaining orders of local diseases there was but little invaliding, and 13 men were sent home invalidated from the effects of injuries.

The number of men finally discharged as medically unfit for further service was 121, being in the ratio of 11·00 per 1,000, lower than in the previous year by 1·02, and than the decennial average rate by 5·52 per 1,000. The chief disabilities necessitating discharge were debility 16 cases, or 1·45 per 1,000; mental affections also 16 cases; disease of the circulatory system 15 cases, or 1·36 per 1,000; tubercular diseases 12 cases, or 1·09 per 1,000; and ophthalmic or aural affections 9 cases each, equal to ratios of ·82 per 1,000.

In Abstract XXXVII. is a table, taken from the report of the Principal Medical Officer, showing the comparative mortality and invaliding in the three grades of officers, non-commissioned officers, and men for the year under report, and for the 10 previous years. It will be seen that the highest mortality ratio was 22·79 among non-commissioned officers, the lowest being 8·29 among officers, the private soldiers having an intermediate rate of 12·54. Taking the average for 10 years it is seen that the mortality in the three grades was in the same order, but that in the year under report it was lower in them all. Invaliding was the greatest among officers, 44·20 per 1,000, next among non-commissioned officers, 42·84, and least among privates,

28·69 per 1,000, and was in the same order in the average ratios for 10 years. Invaliding, it is noticed also, was less frequent than on the average of the previous 10 years in all three grades. *Bombay.*

In Abstract XLVI. is a return, furnished by the Principal Medical Officer, showing the comparative sickness, mortality, and invaliding among men who had extended their service, and those who had not done so, in the Presidency during 1886. From this it will be seen that the proportion of sickness, mortality, and invaliding among those who were completing their extended Indian service is far less than that among the men of shorter service who were serving under the ordinary conditions.

Officers.—The average strength of officers, taken from the annual returns, was 362, the number of attacks of illness was 221; there were 3 deaths, and 16 officers were invalided to England during the year. The rate of prevalence of sickness was, therefore, 610·5 per 1,000, which compares favorably with the corresponding rate in the previous year, showing a decline of 137·4. The mortality rate, also, 8·29 per 1,000, shows a decline of 8·15, and the invaliding ratio, 44·20, has decreased by 24·29. Among the attacks of illness were three cases of enteric fever of which one was fatal; 40 cases of simple continued fever, and 40 of malarial fever, of which three were remittent fever. Of the remaining cases treated diseases of the digestive system furnished 35 and injuries 34. In addition to the death from enteric fever, there was one from laryngitis, and one from nephritis. The causes of invaliding were febrile affections 3 cases, debility 3 cases, and tubercular disease of the lung, hæmoptysis, hæmorrhoids, prolapsus, hepatitis, Bright's disease, cystitis, orchitis, sunstroke, and wound one case respectively.

Women.—The average strength of women was 614, and there were 515 admissions, exclusive of cases of ordinary parturition, and 9 deaths. The ratio of admission was therefore 838·8 per 1,000 as compared with 814·1 in the preceding year, and the rate of mortality was 14·66 as compared with 12·82. Among febrile affections there was one admission for enteric fever, 24 for simple continued fever, and 70, including 3 cases of remittent fever, for malarial fevers. There was one admission for diphtheria and 11 for dysentery. Under the head of debility 193 admissions are returned. Among local diseases there were 11 admissions for nervous diseases, 14 for ophthalmic affections, 11 for respiratory diseases, chiefly bronchitis, 66 for disorders of the digestive system, 29 being cases of dyspepsia, and 17 of diarrhœa, and 53 for diseases of the generative system, including 11 cases of abortion. The deaths were two from pneumonia, and one from pneumonic phthisis, remittent fever, hernia, peritonitis, disease of joints, and heat apoplexy respectively. There was also one death from poisoning by cyanide of potassium, a case of suicide while in a state of mental depression.

Children.—The average strength of children is shown as 1,210; among them there were 674 admissions and 59 deaths, being in the ratios of 557·0 and 48·76 per 1,000 respectively. Compared with corresponding ratios in the preceding year a decrease of 85·4 is observed in the admission rate, and one of 4·64 in the mortality rate. Among febrile diseases there were 20 cases of measles, 2 of scarlet fever, 40 of simple continued fever, 72 of ague and 7 of remittent fever. Dysentery caused 14 admissions, debility 125, and anæmia 22. Among local diseases were 25 admissions for nervous affections, 20 being cases of convulsions; 81 cases of ophthalmic disease, nearly all conjunctivitis; 59 cases of respiratory disease, 50 being bronchial affections; and 140 cases of diseases of the digestive system, including 79 of diarrhœa and 39 of teething. The admissions for diseases of the remaining orders were few in number. The causes of death were infantile convulsions 15 cases, diarrhœa 12, debility 7, bronchitis 5, dysentery 3, simple continued fever, immaturity at birth, and teething 2 cases each, and scarlet fever, ague, remittent fever, congenital syphilis, impervious intestine, tubercular meningitis, tabes mesenterica, meningitis, congestion of the lungs, enteritis, and abscess one case respectively.

SANITARY CONDITIONS.—The following remarks on the health and sanitary conditions of the different divisions and stations throughout the year are taken from the report of the Principal Medical Officer.

Presidency Circle.—At Aden the accommodation for the artillery was good and sufficient, but the strength of the infantry was in excess of the barrack accommodation. The crowding, however, was reduced by some men occupy-

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ing married quarters, and by placing the remainder in tents at night, the barracks being resorted to during the day. The buildings used as hospitals are not satisfactory, but it is in contemplation to build a new hospital at Steamer Point, where a site for it has been determined on. At Deolali the barrack accommodation is deficient, being for 600 men only, whereas the complement of each troopship is 1,100, thus necessitating a large number being placed under canvas. Towards the close of the year there was overcrowding on more than one occasion due to men being placed in barracks and verandahs instead of tents provided for the purpose. A special report was made, and stringent orders were then issued to restrict the number of men in each barrack to the regulations.

Poona Division.—The general health of the troops in the division is said to have been excellent, which is attributed in great measure, to the two regiments quartered at Poona, and also that at Ahmednagar, being seasoned troops. At Poona it was found necessary, in anticipation of the increase of strength in the garrison by the arrival of the 1st Battalion Oxfordshire Light Infantry to arrange for more hospital accommodation than that supplied by the station hospital at Wanowrie, and consequently the old depôt buildings, formerly the artillery hospital, was re-roofed and put into repair and occupied from the beginning of April as a section station hospital. It is situated about 300 yards to the west of the station hospital on rising ground with open country nearly all round it. With regard to the Ghorpuri barracks which have had for some time a reputation for unhealthiness, it is said that compared with previous years there has been less sickness in the year under report. At Kirkee the barracks are reported to be good and to have been generally in excellent sanitary condition throughout the year. The hospital for men is said to be satisfactory, well situated, and convenient and comfortable. At Ahmednagar the general sanitary arrangements are good, but the bath-rooms in the infantry barracks are inferior and attached to dormitories, being a source of dampness; in the artillery barracks there are excellent bath-rooms. To prevent overcrowding in barracks it was necessary to accommodate single men in the married quarters of the infantry barracks, the married men being accommodated in the artillery married quarters. At Satara the general sanitary conditions were good, and no serious defect noticed. The drinking water is obtained from deep wells in the neighbourhood, the quality is fairly good, but the quantity in the hot season is not sufficient. It is said an improvement is under consideration to bring water into the station by pipes from the supply which at present furnishes the city. At Purandhar Sanitarium the sanitary conditions were generally good, but there is some difficulty in airing and warming the barrack rooms during the rains. The hospital accommodation is good, but a separate ward for isolation when necessary would be an advantage, and it is pointed out that there is a building in the hospital compound which could be appropriated to this purpose if it were handed over.

Mhow Circle.—At Mhow the general sanitary condition of the barracks and their surroundings was good. The drain pipes and gutters to carry off roof water and to render the plinths of the barracks dry are gradually being supplied. Certain lower rooms, both in the European cavalry as well as infantry lines, require outlet shafts, as ventilation is very imperfect. It is reported that "the water supply of Mhow has frequently been a question of much urgency and anxiety, but the deficiency that has been experienced last year settled the question, and the long contemplated project of an artificial lake is being carried out energetically. This lake is situated near Bucha, about five miles to the south-west of Mhow, and will be formed by throwing a bund across the valley and collecting the rainfall over an area of three square miles. It is proposed to convey the water to a tank in the infantry lines, as the highest part of the cantonment, and thence distributing it by gravitation to all the civil as well as military occupants. This work will have a most beneficial influence on Mhow, rendering it a more desirable place than ever. Not only would the constant fear of a water famine be entirely removed, but the distribution by pipes would in a great measure do away with the bheestie and his mussack, so often to be viewed with suspicion, and there would be always water available for the gardens and trees and dusty roads." The completion of these works is expected in 1888.

At Nasirabad it is reported that the barracks are well ventilated and there was no overcrowding. During the year the bed spaces were numbered both in barracks and hospital, and ventilators were supplied in several rooms in the infantry barracks. Lightning conductors were provided to the barracks and hospital building occupied by British troops. The sanitary conditions at Neemuch were generally satisfactory; the lighting was good, and no complaints were made with regard to ventilation. The water supply is derived entirely from wells, which are well built and most of them covered in, and every precaution is taken to prevent pollution. Rations and supplies were generally good and satisfactory. At Deesa it is said the sanitary condition of the cantonment is excellent, the water good, and every possible precaution taken to limit the prevalence of disease. The general sanitary state of the barracks and lines at Ahmedabad was very satisfactory, the water supply good and sufficient, the bathing and lavatory arrangements ample; but the means of carrying off the waste water by hand labour is unsatisfactory and insufficient. The dry earth system is well carried out in the latrines. There was no overcrowding either in barracks or hospital. The latter is a new building, but the ventilation is defective. Plans and estimates for remedying this have been prepared and forwarded, but no further action had been taken thereon at the time of report. Venereal diseases were very prevalent, but in August the lock hospital was reopened with benefit.

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Sind District.—The general health of the troops was favorable as compared with the preceding year. As far as climate is concerned the year was a trying one. In Karachi the temperature reached the high maximum of 115° in May, while in Hyderabad the maximum temperatures for April, May, June, and July were 119° , 122° , 112° , and 109° respectively, the nights being almost as hot as the days. The rainfall was also exceptional; yet, notwithstanding the high temperature, the heavy rainfall, and a full inundation of the river at Hyderabad, fever was much less prevalent at both stations. At Karachi all sanitary arrangements were carefully attended to during the year. It is said that the hospital is large enough usually for the garrison only, but there are times when more accommodation is required. A good many men are sent to the station for change of air, and on their arrival it is necessary to admit some of them, and men from corps passing through on relief also require admission, and an increase of ward space is desirable. During some part of every year it is necessary to occupy a portion of the infantry married quarters as a female hospital, but it is entirely unsuited for the purpose; the rooms are dreary and comfortless and have earthen floors only. It is nearly a quarter of a mile from the station hospital, and as there is not a separate establishment of cooks it is difficult to serve the diets properly. At Hyderabad the barracks consist of 12 blocks built of brick, single storied, with tiled roof and paved floor, but they are of obsolete pattern. The cubic space is ample, for they are very lofty, but the superficial area is inadequate. Owing to the want of space due to defective construction the distance between the soldiers' cots was not sufficient, and it was necessary to obtain an extra barrack building and by careful distribution of the men to mitigate the evil. The ablution rooms are attached to the barracks, water is laid on, and the means of washing, &c. are sufficient. Four bath-rooms open on to the central lavatory, but they are not much used, as the men prefer resorting to the swimming bath close by. The latrine arrangements are satisfactory and cleanliness is observed, but owing to the great heat, and the dry earth being of a sandy character, it is difficult to prevent effluvia entirely. The accommodation in the station hospital both as regards cubic and superficial space is ample for the requirements of the garrison, and the ventilation and general sanitary arrangements are satisfactory.

The Principal Medical Officer in some general observations on the health and sanitary conditions of the command alludes to some remarks he made in his former report on the evil consequences attendant on the closure of certain lock hospitals, and he states that these were remedied early in the year (1887) by the reopening of these hospitals, and that the influence of these institutions is already observable.

He thinks that the floors of all barracks and hospitals should be made of some impervious material, impervious to water as well as to gases, and therefore quite non-absorbent. If such were the case the floors might be periodi-

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cally flushed and washed without the risk of any disease germs or sources of infection of any kind being left in the interstices of the floorings. The existing floors are generally paved with stones of no great size, connected with lime cement, which cannot be said to be quite impervious to water, more especially after it has been some time laid, or when done with inferior materials as is so frequently the case in this country. He suggests that these floors should be laid with good but rough concrete, and covered with some impervious material such as good asphalt, continuous throughout, without joints, and having a fairly smooth surface.

It is understood that asphalt has been tried in some hospitals with only partial success, on account of its becoming soft in the hot weather, and apt to receive impressions from the legs of bed cots and other articles of furniture, but it is believed a better description of asphalt can be made (by a proper admixture of sand and other binding substances) which would resist the hot weather and retain a smooth and firm surface.

Arrangements for the removal of roof water from barracks and hospitals though partially carried out at some stations are still very incomplete, the majority of the buildings throughout the Command being entirely unprovided with the necessary pipes and gutters. Consequently the foundations become saturated with water after each fall of rain; a condition of things in every way prejudicial to health.

Improved means for the entire removal and proper disposal of bath water from barrack lavatories are also much required.

XIII.—ON THE HEALTH OF THE TROOPS SERVING IN EGYPT.

Sickness and Mortality.

In the following report are given the statistics of sickness and mortality of *Egypt*. the troops stationed in Lower Egypt, of those in Upper Egypt, from the close of active operations on the 22nd January, and also of the small force at Suakin from the beginning of the year until the 7th May.

The subjoined table shows the more important of the health statistics in the different portions of the force as specified above, as well as those of the whole Command during the year.

1886.	Average Annual Strength.	Ad-missions.	Deaths			Invalids	
			In Com-mand.	Of Invalids.	Total.	Sent Home.	Finally dis-charged.
Lower Egypt -	7,348	9,815	145	—	145	} 901 {	—
Frontier Force -	3,503	4,068	247	—	247		—
Suakin -	211	187	5	—	5		—
Total force	11,062	14,070	397	11	408	928	270

(continued.)

1886.	Average Daily Sick.	Ratios per 1,000 of Strength.				
		Ad-missions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Average constantly Sick.
Lower Egypt -	601·38	1,335·7	19·73	} 83·03 {	—	81·84
Frontier Force -	205·30	1,161·2	70·51		—	58·60
Suakin -	13·86	886·2	23·70		—	65·69
Total force	820·54	1,271·9	36·83	23·89	24·40	74·17

Comparing the ratios of sickness and mortality in the whole force with the corresponding results in the preceding year, it is observed that while the admission ratio has declined by 250·1 per 1,000 and that of constant inefficiency through sickness by 6·06, the mortality ratio has increased by 7·90; and if comparison is made with the average results of the preceding three years there is observed to be a decrease of 54·9 and 3·78 per 1,000 in the admission and constantly sick rates respectively, but an increase of 10·67 in the death rate. The average sick time to each soldier was 27·07 days, and the average duration of each case of sickness 21·28 days, the former being shorter by 2·21 days and the latter longer by 2·04 days than the corresponding period in the preceding year, while both are shorter than average periods in the previous three years by 1·38 and ·16 days respectively. Comparing the results for Lower Egypt alone with those in the preceding year, a decrease of

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163·9 per 1,000 has occurred in the admission rate, and one of ·99 in the death rate, but there is a fractional increase in the ratio of constantly sick. If similar comparisons are made as regards the Frontier Force and the Suakin Force, it is found in the former case that though the death rate was much higher there was a considerable decrease in the ratios of sickness, and in the latter case a marked decline is observed in the ratios of both sickness and mortality.

The statistics of sickness, mortality, invaliding, &c. among the different corps which served in the Command during the year are given in Abstract XLII.

Taking arms of the service it is calculated that the admission ratio of the cavalry was 1286·8 per 1,000, that of the artillery 1209·2, of the engineers 1185·9, of the infantry 1338·0, and of departmental corps and garrison staff 666·6. The mortality ratios were, in the cavalry, 31·86, in the artillery 42·09, in the engineers 37·67, in the infantry 37·63, and in departmental corps 27·57 per 1,000. The ratio of constant inefficiency was highest in the artillery, 78·07 per 1,000, next in the infantry, 77·60, then in the cavalry, 72·37, followed by the engineers with 56·86, and departmental corps and garrison staff with 44·36 per 1,000.

With regard to the amount of sickness in particular corps it will be observed that the cavalry were represented by two regiments, the 19th and 20th Hussars; of these the highest admission ratio was in the former, 1492·2 per 1,000, and the highest constantly sick rate, 80·73, but there was no mortality; this corps left the Command in May. In the 20th Hussars the admission rate was 1195·3, the constantly sick rate 68·52, and the rate of mortality 45·05 per 1,000 dependent on 21 deaths. In the artillery, among batteries with fair average annual strength, the battery with the highest admission ratio was the 3rd Battery, 1st Brigade, Northern Division, followed by the 2nd Battery, 1st Brigade, South Irish Division. In the last-named battery also there was the highest rate of mortality, 129·03 per 1,000, dependent on 16 deaths. In the engineers the admission ratio was 1185·9, and the mortality rate 37·67 per 1,000. In the infantry the regiment showing the highest ratio of admission, 1758·5 per 1,000, was the 1st Battalion, Dorsetshire, it also gave the highest mortality rate, 157·17 per 1,000, dependent on 69 deaths. The next highest admission rate was 1763·2 per 1,000 in the Cameron Highlanders, whose mortality rate amounted to 29·92 per 1,000 caused by 24 deaths.

Calculations have been made to determine the influence of age and length of service in the Command on sickness and mortality among the troops; from these it appears that the ratio of admission among men under 20 years was 996·8 per 1,000, between 20 and 25 years it was 1489·1, between 25 and 30 years 1142·6; it then declined to 733·7 in the next five years, and to 709·3 over that age. Mortality, which among men under 20 years of age was at the rate of 28·75 per 1,000, rose to 41·85 among men between 20 and 25 years, but fell to 30·16 in the next quinquennium, and to 20·57 in that following, though it increased again to 32·52 among men over 35 years of age. With regard to length of service, the admission ratio among men who were under one year's service in the Command was 1554·7 per 1,000, among those in their second year of service it declined to 1464·1, in the third year it fell to 699·6, and in the fourth year to 683·0. In the fifth year of service the admission rate was again very high; but in this case the average strength was small. The death rate among men in their first year of service in the Command was 37·27 per 1,000, among men in their second year it was 48·78, after which it declined, being among men in their third year of service in the Command 30·71, and among those in their fourth year 12·79.

The sickness, mortality, invaliding, &c. in the different groups and orders of diseases are shown in Abstract XXXVIII.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—In the first sub-group of these diseases *eruptive fevers* show 58 admissions and 3 deaths, of which 51 cases and all the deaths were due to small-pox. In the preceding year there were 52 cases and 4 deaths, the ratios of admission and mortality being 5·4 and ·42 per 1,000; consequently those for the year under report, 4·6 and ·27, show a slight decline; 18 of the cases were treated at the Citadel, Cairo, and 17 with 2 deaths at Abbassiyeh. Of the former a large number

occurred in the Welsh regiment, quartered at Kasr-el-Nil barracks. No source of contagion could be traced, but the cases were probably contracted in the towns, where the disease is very prevalent among the natives, among whom vaccination is very imperfectly carried out. Of the remaining cases two occurred at Assiout, one severe and the other very mild, and 14 with one death, occurred in the Frontier Field Force. Concerning these it is stated the disease appears more or less endemic in the native villages, and the cases among the troops originated there though all efforts to ascertain the accurate source of disease proved futile; the first case occurred at Shellal, Assuan, in November, and by the end of the year there had been 14 cases. A hospital was established on a small island in the river, and all small-pox cases sent there for treatment.

Enteric fever caused 733 admissions and 241 deaths, being in the ratios of 66·3 and 21·79 per 1,000, and there were 9·48 men per 1,000 constantly sick from this disease. Compared with the result in the previous year there is an increase of 14·5 per 1,000 in the admission rate, 7·61 in the death rate, and 4·51 in the constantly sick rate, and in comparison with similar average ratios for the preceding three years the admission ratio has increased by 28·1, the mortality ratio by 12·69, and the ratio of constant inefficiency from this disease alone by 4·44 per 1,000. The per-centage of mortality to attack was nearly 33, that in the preceding year having been 27.

Of the total number of cases treated 250, with 69 deaths, occurred in Lower Egypt, 467 and 170 deaths in the Frontier Field Force, and 16 cases with two deaths at Suakin.

Of the cases in Lower Egypt, 62 with 17 deaths occurred at the Citadel, Cairo; 35, with 11 deaths, at Abbassiyeh; 134 and 29 deaths at Alexandria; 13 and 7 deaths at Keneh, and 6 cases with 5 deaths at Assiout. The admission and mortality ratios per 1,000 of strength were 17·9 and 4·9 at the Citadel, 20·1 and 6·3 at Abbassiyeh, and 70·8 and 15·3 at Alexandria respectively. The Principal Medical Officer, Surgeon-General J. O'Nial, C.B., states that the sanitary condition of the barracks and the water supply of the troops at Lower Egypt are very good; but the sanitary condition of the towns in which, or close to which, are these barracks, is very bad, and it is not surprising, therefore, that the troops should suffer severely from this disease.

The medical officer in charge of the Station Hospital, Ramleh, remarks that, "no definite conclusion as to the causation of the disease can be drawn from any special localisation of the troops, regiments under canvas and those occupying barracks both furnished their quota of cases. Regiments from 'up Nile,' especially the 1st Royal West Kent and 2nd Essex Regiment, furnished many cases, the latter 25 cases between the 1st and 5th April; these must have been contracted at Assuan or while coming down the river. They principally occurred in young soldiers of from two to four months' service in the country." He also ascribes the cases that have arisen locally more to the dirty slums of Alexandria, where proper sanitary arrangements are unknown, than to the barracks.

The cases which occurred in the Frontier Field Force were spread over many stations, the greater part being at Assuan, 276 cases and 97 deaths, followed by Wady Halfa with 98 cases and 37 deaths, Akasheh 35 cases and 15 deaths, Korosko 28 cases and 16 deaths, Kosheh 18 cases and 2 deaths, &c.

The Principal Medical Officer, Frontier Field Force, reports that "this disease appears to be endemic along the Nile in proximity to native towns whose inhabitants have [but crude ideas of conservancy. The low-lying camps along the river bank at Shellal and North End, and the local insanitary conditions inseparable from all camps on or near cultivation affording foci."

The medical officer in charge of the station hospital at Assuan remarks in his report, when speaking of enteric fever, "Its prevalence must, in my opinion, be chiefly owing to climatic causes, and not to the insanitary condition of the camps or water supply as, at least, on Tagoog Heights, the sanitary arrangements are very fairly satisfactory, and the Nile water is better than any usually obtainable, and with the precautions taken of having the supply for drinking purposes drawn from mid-stream and boiled and filtered

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" before use, it is most improbable that it should have been the cause of such an extensive outbreak."

The proportion of deaths to attacks in the principal stations was as follows:—Citadel, 1 to 3·64; Abbassiyeh, 1 to 3·18; Alexandria, 1 to 4·62; and in the Frontier Field Force 1 to 2·74. With reference to the high mortality at Assuan, in proportion to admissions, it is remarked that the unfavorable conditions must be taken into account, and that as the hospital consisted of huts the patients were not so well protected from the heat, which during part of the time was very great, as those men who were in permanent barracks in Lower Egypt. During the greatest heat, from 12th to 19th June, average maximum temperature in shade 120° Fahr., no less than 23 deaths occurred, of which 18 were patients suffering from enteric fever.

Of the cases at Suakin all but one were treated at Graham's Point. It is said that enteric fever and simple continued fever were the prevailing diseases, and later on some cases of dysentery occurred. These were due to climate and were not traced to any insanitary condition.

The admissions for *simple continued fever* were 1,818 in number, being in the ratio of 164·3 per 1,000; but this compares favorably with 202·5 per 1,000 in the previous year. Of the total number of admissions 1,072 occurred in Lower Egypt, being in the ratio of 145·8 per 1,000, which shows a decline of 37·5 from the corresponding result in the foregoing year. The medical officer in charge of the Citadel hospital, where 474 cases were treated, states that "August and September furnished nearly four times as many cases as any of the other months. These months are damp and oppressive, the whole Delta being saturated, and in many parts altogether under water from an overflowing Nile. The troops quartered at Kasr-el-Nil seemed to suffer the most; perhaps some chill at evening was in many cases a direct exciting cause. It must not be forgotten that many of these cases may have been enteric fever, as it is frequently impossible to diagnose between them; and with the greatest care this source of error is likely to crop up. A great number of these cases, however, especially in the fall of the year, were only of a few days' duration, and would have been returned as *febricula* under the old nomenclature."

The number of admissions in the Frontier Field Force was 726, or 207·2 per 1,000, which is a good deal below the similar ratio in the preceding year. The Senior Medical Officer at Assuan remarks that "although there were a large number of admissions for this disease no deaths were recorded. Very great care was taken as regards diagnosis, and though perhaps some few cases were really mild enteric cases, yet every effort was made to be correct. Some of the cases were very severe; high temperature, and crisis about fifth or sixth day. In such a climate as that of Assuan fevers, which may be designated thermic must be prevalent in the hot season, more especially in young soldiers, and when drink can be obtained without difficulty."

Dysentery caused 796 admissions and 35 deaths, including two of invalids, being in the ratios of 72·0 and 3·16 per 1,000 respectively. The cases were distributed as follows:—In Lower Egypt there were 279 cases and 7 deaths, the admission rate being 37·9 per 1,000. 114 of the cases occurred at Alexandria with 2 deaths, 99 at the Citadel with 3 deaths, and 58 cases at Abbassiyeh. The disease was most prevalent in May, June, and July, it is said. In the Frontier Field Force there were 495 attacks and 23 deaths, the admission ratio being 141·3 per 1,000 and death rate 6·56. The Senior Medical Officer remarks that "this disease was largely prevalent and of a very severe and obstinate character. Climatic peculiarities, monotony of diet, and absence of fresh vegetables appear to have been the principal predisposing or exciting causes. The very dry air, heat of sun, great and sudden variations of temperature tended to produce internal congestions more readily as many of the men were enervated by effects of climate. The monotony of life and diet and the want of fresh vegetables tended to produce dyspeptic symptoms and thus predisposition to disease." In the Suakin Force there were 22 cases, which gave a high annual admission rate. Three of them were fatal.

For other diseases of this sub-group, 43 admissions and one death are recorded. Of the attacks, 36 were cases of epidemic diarrhoea, all of which occurred at Akasieh. "The disease began almost immediately on the occu-

"pation of the camp and ran its course, attacking with greater or less severity nearly every occupant, and entirely, or almost entirely, ceased when enteric fever showed itself." The medical officer in charge reports also that he considers the dirty condition of the camping ground to have been the chief exciting cause. The remaining admissions were caused by mumps chiefly, and there was one fatal case of diphtheria at the Citadel Hospital, in which tracheotomy was performed without avail.

Malarial Fevers.—In this group 154 admissions are recorded, equal to a ratio of 13·9 per 1,000 of strength, which is less than half that in the preceding year, and is also below the average. 138 cases are returned as ague, and 16 as remittent fever; of these 131 cases of ague and 8 of remittent fever occurred in Lower Egypt, 59 cases of ague being at the Citadel, 28 at Abbassiyeh, and 40 at Alexandria with 8 cases of remittent fever. In the Frontier Field Force there were 7 cases of ague only and 2 of remittent fever, and in Suakin 6 cases of the latter. No death occurred from these diseases. It is stated by the Principal Medical Officer that in most instances these cases occurred in men who had previously served in malarious stations.

Septic Diseases.—For these affections 37 admissions are returned, equal to 3·3 per 1,000. They comprised 35 cases of erysipelas and 2 of pyæmia. 25 cases of the former and both the latter occurred in the Frontier Field Force, and the remainder of the erysipelas cases occurred in various stations in Lower Egypt. Of 15 cases of erysipelas which occurred at Wady Halfa alone it is stated that the cases were all severe, and one terminated fatally, but the patient had also been drinking to excess and the disease was attended with violent delirium. The cases of pyæmia happened at Assuan, and both had a fatal result. One case was due to extravasation of urine, and though the affected parts were freely laid open on the day of admission, septic poisoning took place, which rapidly terminated fatally. The other case resulted from an abscess, consequent on suppurative arthritis of the knee joint.

In the sub-group of venereal affections 865 admissions for *primary syphilis* are returned, being in the ratio of 78·2 per 1,000. To render this ratio comparable with those in former years, it is necessary to add the admissions for simple venereal ulcer, now returned under diseases of the generative system, which raises the ratio to 123·2 per 1,000, which is lower than that in the previous year by 49·2 and than the average rate of the preceding three years by 67·4 per 1,000. *Secondary syphilis* caused an admission rate of 23·0 per 1,000 dependent on 255 admissions, this ratio is below that in the preceding year by 11·5, and below the average ratio by 7·4. The admissions for *gonorrhœa* numbered 1,085, equal to a ratio of 98·1 per 1,000, which also shows a decline, 15·2, as compared with the corresponding rate in the preceding year, and a slight one, 4·4, as compared with the triennial average rate. Including all forms of venereal diseases, the ratio of admission for the year under report amounted to 249·3 per 1,000, being below the corresponding rate in the previous year by 75·9, and below the average rate for three years by 79·2. The ratio of constant inefficiency on account of these affections was 16·18 per 1,000, which shows a decline of 4·53 from the preceding year, and is below the average rate by 6·41.

In Lower Egypt only the admissions for primary syphilis were at the rate of 179·6 per 1,000 (including the cases of simple venereal ulcer, which alone gave a ratio of 73·9), which is below the corresponding rate in 1885 by 21·6; the admission ratio for secondary syphilis was 25·0, being lower by 13·2, and the admission rate for gonorrhœa was 131·3 per 1,000, which is fractionally higher than in that year. The total admission rate for all forms of venereal disease in Lower Egypt was 335·9, and the ratio of constant inefficiency on this account 22·17 per 1,000. Though these ratios show a large amount of venereal disease, a slight decline is observed in each as compared with the preceding year, which in its turn, showed slightly lower ratios than in the year which preceded it.

In the Frontier Field Force and Suakin there was, as might be assumed, comparatively little venereal disease. In the former the admission ratio for all forms of disease was 78·1 per 1,000, and the constantly sick rate 4·44, and at the latter place the admission rate was 75·8 per 1,000.

In the next group of diseases, it is observed that 57 admissions and one death are returned under the head of *parasitic diseases*, being in the ratio of

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5·1 per 1,000. The cases comprised 51 of *tænia solium*, 1 of *tænia medio-cannellata*, 4 of *ascaris lumbricoides*, and one fatal case of *fasciola hepatica*; the latter case occurred at Ramleh, and, after some weeks in hospital, proved fatal.

In the group of dietetic diseases 4 admissions are recorded for *scurvy* and 74 for *alcoholism*. Two of the former occurred at Koshah and one at Derawi, and the fourth was at Cairo. Of the cases in the Frontier Field Force the Principal Medical Officer reports that "these were the only cases in which the symptoms were well marked. It appeared to me that the anæmic appearance of the men was greatly due to what may be termed scorbutic taint. Extra lime juice, fresh vegetables, and milk were issued with the most beneficial results." The admissions due to the abuse of alcohol were recorded as 70 for alcoholism and 4 for delirium tremens, from which there was one death. 14 cases of the former and one of the latter occurred in the Frontier Field Force, one case of alcoholism in Suakin, and all the remainder in Lower Egypt.

Under the head of *debility* 668 admissions are returned, equal to a ratio of 60·4 per 1,000, which compares favorably with the last year's rate, but is about the average. Many of these cases were the direct result of climatic and dietetic causes, and others of fevers.

Among general diseases which are not classified *rheumatism* caused 339 admissions and 3 deaths. The ratio of prevalence was 30·6 per 1,000, which is about the average rate though somewhat below that in the previous year. Among the cases were 36 of rheumatic fever, which was also the cause of the deaths. Rheumatic affections occurred principally in Lower Egypt, the Frontier Field Force showing 69 admissions with 2 deaths (among 8 cases of rheumatic fever), and Suakin only 4 cases.

Tubercular Diseases caused 39 admissions and 6 deaths, including 3 of invalids. Of the cases six occurred in the Frontier Field Force and the rest in Lower Egypt. With the exception of one case, fatal, of general tuberculosis, all the cases and deaths were due to tubercular disease of the lungs. The admission ratio, 3·5 per 1,000, appears to compare very favorably with those of former years, but this is in some measure influenced by the alteration in the method of registration of some cases formerly recorded as phthisis pulmonalis.

The remaining admissions in this group comprised one fatal case of cancer, two cases of scrofula, one of anæmia, and the rest non-malignant new growths.

LOCAL DISEASES.—The admissions for *diseases of the nervous system* were 137 in number, including 15 cases of mental disease. The admission ratio, 12·3 per 1,000, shows a considerable decrease from that in the preceding year which amounted to 56·3, but the latter was, due to the very great prevalence of sunstroke (then returned under diseases of nervous system) and heat exhaustion at Suakin in that year. In the year under report there were only 20 cases of nervous affection in the Frontier Field Force and one single case at Suakin, the remaining 116 were in Lower Egypt, and were in the ratio of 15·7 per 1,000, which compares favorably with the similar result in the preceding year. The principal causes of admission were neuralgia and epilepsy. The deaths were due to inflammation of the brain or its membranes in 4 cases, and to paralysis and epilepsy in one case respectively, both of which occurred at Assuan.

Diseases of the Eye caused 726 admissions, equal to a ratio of 65·6 per 1,000, which is lower than in the previous year by 7·3, but above the average. In Lower Egypt there were 492 cases, or 66·9 per 1,000, rather above the rate in the foregoing year; of the cases 448 were simple conjunctivitis. In the Frontier Field Force the admissions numbered 231, of which 219 were cases of conjunctivitis; the ratio of admission was 65·9 per 1,000, a considerable decrease from the previous year's rate.

Of diseases of other organs of special sense there were 160 cases; more than three fourths of which were cases of inflammation of the external meatus.

Diseases of the Circulatory System were the cause of 169 admissions and 3 deaths, including that of one invalid. The admission ratio, 15·3 per 1,000, has declined when compared with ratios in former years. In Lower Egypt there were 129 cases, or 17·5 per 1,000, almost identical with that of the previous year. About two thirds of the admissions were cases of palpitation, and

there were 32 cases of valve disease of the heart. The deaths were one case *Egypt*. of fatty degeneration and two cases of valve disease.

Diseases of the Respiratory System gave an admission ratio of 45·0 per 1,000, which is about the average rate, though a slight increase on the previous year's rate. There were 20 deaths, a mortality rate of 1·81. Out of 498 cases in all, 354 were in Lower Egypt, or 48·2 per 1,000, and 141 in the Frontier Force, or 40·2, both ratios being rather above those corresponding in the preceding year. Of the total number of cases 313 were bronchial affections, 126 pneumonia, and 32 pleurisy. The causes of mortality were pneumonia 16 cases, œdema glottidis 2, pleurisy and pneumonic phthisis 1 case each.

Diseases of the Digestive System caused 2,223 admissions and 23 deaths, including 3 of invalids, being in the ratios of 200·9 and 2·08 per 1,000 respectively. Compared with the corresponding ratio in the preceding year there is a decline of nearly one third, but if the admissions for dysentery, now recorded above, be added, the ratio, though still lower than that in 1885, differs only by 26·4, and is above the average rate. In Lower Egypt there were 1,478 admissions, or 201·1 per 1,000, which was below the last year's rate by 75·3, and there were 17 deaths. In the Frontier Field Force there were 704 admissions and 3 deaths; the admission ratio, 200·9 per 1,000, shows a marked decrease. Out of the total number of admissions over two thirds were caused by affections of the mouth and throat, dyspepsia, and diarrhœa, 754 for the last-named alone. Hepatic affections caused 335 admissions, of which 155 were cases of jaundice, and 17 of hepatic abscess. The deaths in the country were caused by acute yellow atrophy of the liver 3 cases, abscess of liver 13, peritonitis 2, and enteritis and diarrhœa 1 case respectively. The deaths of invalids were due to abscess of liver in two cases and diarrhœa in one.

The admission ratio for *diseases of the lymphatic system*, 17·3 per 1,000, is almost identical with the corresponding rate in the previous year, but that for *diseases of the generative system*, 70·0, is much higher, and that for *urinary affections* as much lower, consequent on the recent alterations in the method of registration. *Diseases of the connective tissue and cutaneous affections* show ratios below the average and below those which correspond with them in the preceding year.

Under the head of *poisons* are returned two admissions and one death. Both cases were instances of acute alcoholic poisoning.

Injuries.—There were 73 admissions for general injury and 41 deaths. The admissions comprised 2 from burns and scalds, 13 from sunstroke, 54 from heat apoplexy, 2 from multiple injury, and 2 from exhaustion. One case of sunstroke occurred at Abbassiyeh, and 12 in the Frontier Force, including one fatal case out of hospital. One case of heat apoplexy occurred at the citadel, fatal; three at Abbassiyeh, one fatal; and 39 at Assuan, and 11 at other stations in Upper Egypt; among these 24 deaths occurred, 6 being out of hospital. The prevalence of sunstroke and heat apoplexy in the Frontier Field Force is said by the Principal Medical Officer to have been apparently due, in addition to intense heat, to insufficient protection from sun, debilitated condition from climate and disease, and probably intemperance. Two cases of multiple injury occurred, one fatal, from a fall from a train between Alexandria and Cairo, and the other, from a fall from a window, at Alexandria. The man recovered. 13 cases of drowning are recorded, one of which was believed to be suicidal, but the remainder were accidental. A case of suicide by hanging occurred at Alexandria, but in this as well as in the above-mentioned presumed case of suicide, the motive was not discovered. There was also a death from asphyxia from plugging of air passages with vomited matter while drunk. Local injuries caused 993 admissions and 15 deaths, the ratio of admission, 89·8 per 1,000, showing that they were not quite as frequent as in the preceding year. The admissions were mostly of ordinary character, contusions, wounds, sprains, &c. being the most frequent. The following were the fatal cases:—One case of concussion of the brain at Abbassiyeh, resulting from a fall; one of compression of the brain at Ramleh, due to a fall from a horse; three from wounds, all cases of cut-throat, suicidal; two of them occurred at Assuan and one at Cairo; (in none could any motive be discovered, but it is said that one of the men was suffering from hepatic abscess); five from gunshot wounds, three of which were accidental and caused by the explosion

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of a shell at Abbassiyeh, and two were suicidal, one at Cairo, the supposed motive being pecuniary difficulties, and the other at Assuan, to which no motive could be assigned; four deaths from fractures, three being cases of fracture of the skull resulting from falls, and one a case of fracture of the spine, due to a fall from a horse; and there was one death from dislocation of the fourth cervical vertebra, resulting from the man having plunged head foremost into a swimming bath where there was very little water. There were two deaths from wounds received in action at Giniss at the close of the preceding year.

The operations performed during the year comprised an amputation at the wrist on account of gunshot wound, successful; an amputation at upper third of thigh, in which death followed; two cases of extraction of pieces of shell, both of which terminated fatally. All the foregoing operations were necessitated by injuries received at the accidental explosion of a shell at Abbassiyeh. There was also an amputation of the foot, on account of injuries caused by a fall, with successful result. There were two cases of tracheotomy, one on account of diphtheria, and the other for œdema glottidis, both with fatal result. One case of trephining of skull after gunshot wound, but the man died from cerebral abscess. Also aspiration of hepatic abscess, removal of non-malignant growth, and several minor operations, all with successful result.

Invaliding.—The total number of men invalided home during the year was 928, equal to 83·89 per 1,000 of strength, which is lower than the corresponding ratio in the preceding year by 68·51, and below the average rate of the previous three years by 18·42. The principal causes of invaliding were enteric fever 274 cases, or 24·8 per 1,000, other continued fevers 50 cases, dysentery 98, debility 140, rheumatism 32, tubercular diseases 33, nervous affections, including 15 of mental disease, 32, cardiac disease 68, respiratory affections 25, diarrhoea 20, hepatic affections 28, &c. The ratios of invaliding according to age were under 20 years, 68·16 per 1,000, between 20 and 25 years 92·71, between 25 and 30 years 75·02, between 30 and 35 years 50·29, and over that age 109·75; the ratios of invaliding according to length of service in the Command were, in the first year of service, 99·93 per 1,000, in the second year 121·66, and in the third year 35·23. The ratios of invaliding in the three chief arms of the service did not greatly vary, being for cavalry 95·60, artillery 94·39, and infantry 85·12; in the engineers the rate was 50·25, and in the departmental corps 67·67 per 1,000.

The number of men finally discharged the service by invaliding was 270, or 24·40 per 1,000, which is less than half the corresponding ratio in the previous year and below the triennial average rate by 9·58. The chief disabilities necessitating discharge were debility 45 cases, or 4·07 per 1,000; diseases of the circulatory system 64 cases, or 5·79 per 1,000; tubercular and nervous diseases, each 32 cases, or 2·89 per 1,000; and respiratory affections 15, or 1·36 per 1,000.

With regard to the amount of invaliding the Principal Medical Officer remarks that it would probably have been necessary to send home a much larger number of young soldiers had it not been arranged to send a number of young and weakly men to Troodos in Cyprus during the greater part of the hot weather. In all 16 officers and 951 non-commissioned officers and men were sent to Cyprus. The change was most beneficial to the men, but, unfortunately, on their return from Troodos, they had to wait a short time in the plains before embarkation, and some contracted malarial fever.

Officers.—The average strength of officers in the whole of Egypt is returned as 415 and the number of admissions 315 and of deaths 9. The rate of prevalence of sickness, therefore, was 759·0, and that of mortality 21·68 per 1,000, considerably below the corresponding rates in the previous year.

In Lower Egypt alone the average strength was 276, the number of attacks of illness 193, and of deaths 6, being in the ratios of 699·3 and 21·74 per 1,000, as compared with 1177·5 and 18·11 respectively in the preceding year. Among the causes of illness were 1 case of small-pox, 1 of measles, 10 of enteric fever, with 3 deaths, 33 of other fevers, and 6 cases of dysentery, 1 fatal. There was also one death from pneumonia and one from diaphragmatic hernia. In the Frontier Field Force the average strength was 128, there were 120 admissions and 3 deaths; the ratios of admission and mortality were therefore 937·5 and 23·44 per 1,000. The rate of prevalence of sickness

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among officers, though high, compares favorably with the corresponding result in the previous year. The principal causes of admission were fevers, dysentery, and affections of the digestive organs. Small-pox caused one admission, enteric fever 17 admissions and 1 death, simple continued fevers 33 admissions, and dysentery 14. There were also two deaths from heat apoplexy. At Suakin there were two admissions in an annual strength of 11 officers, the sick rate being 181·8 per 1,000. The causes of admission were enteric fever and ague, one case of each.

The number of officers invalidated from the Egyptian command during the year was 42, being equal to a ratio of 101·2 per 1,000, which though still high is much lower than the corresponding rate in the preceding year. The causes of invaliding were enteric fever 13 cases, debility 10, affections of the digestive system 4, simple continued fever, ophthalmic affections, and acute pneumonic phthisis 2 cases each, and dysentery, rheumatism, mania, heart disease, asthma, abscess, urinary fistula, prostatitis, and apoplexy one case respectively.

Women and Children.—The average strength of women in Lower Egypt was 108; among them there were 95 admissions and 1 death. The admission ratio, 875·9 per 1,000, is a good deal in excess of that in the previous year. Among the cases treated were 2 of small-pox, 12 of simple continued fever, 7 of dysentery, 10 of debility, and 16 of conjunctivitis. There was one death from carcinoma. The average strength of children was 156, and there were 152 admissions and 13 deaths. The ratio of admission was 974·3 and that of mortality 83·3 per 1,000. The rate of prevalence of sickness shows a considerable increase. Among the cases treated were 4 of small-pox, 2 each of scarlet fever, measles, and whooping cough, 4 of enteric fever, 11 of simple continued fever, 68 of conjunctivitis, and 21 of diarrhoea. The causes of death were diarrhoea 4 cases, dysentery, convulsions, and bronchitis, 2 cases each, and meningitis, enteritis, and debility, one case respectively.

SANITARY CONDITIONS.—The sanitary reports of medical officers in Lower Egypt show that great attention is paid to the sanitary condition of the different barracks and hospitals with, as a rule, satisfactory results as regards the quarters themselves, but the sanitation of the towns in Lower Egypt and of the country generally is in a very unsatisfactory state, though, as the Principal Medical Officer, Alexandria, states, in speaking of that station, that “it is noticeable that sanitation in the town itself is not the unknown quantity that it was in the past, although much remains to be done in that direction.” He states also that “the sanitary condition of the several barracks in the district and of the station hospital at Ramleh have been very well looked to during the year. Some of them, not having been built for these purposes, have faults of original construction. Much, however, has been done to mitigate these, and more is still intended. From time to time sanitary defects were pointed out, and usually quickly remedied; and in no case was the occurrence of disease directly attributable to these. The surroundings of some of the barracks in Alexandria are not such as would augur well for the maintenance of a high standard of health, but still the most has been made of the unsuitable.” There was no overcrowding, and the state of ventilation was satisfactory generally. The dry earth system of conservancy was in use, but it is said met with the usual difficulty, viz., that of getting the men to fulfil their part in it. Water supply was good and ample from the Alexandria waterworks, the source being the Mahmoudieh canal. The rations, cooking arrangements, ablution rooms, clothing, &c. are all satisfactorily reported on. Several improvements and renovations were made to the different barracks during the year as regards accommodation, ventilation, &c.

With regard to Cairo the reports of medical officers show that the different barracks afforded ample accommodation for the troops, and that as a rule they are well ventilated. The Citadel barracks, being situated at a considerable elevation over the surrounding country, have every facility for successful drainage. The Kasr-el-Nil barracks, on the other hand, are situated on the bank of the Nile overlooking the river. The sub-soil is composed of alluvial deposit, sand, and rubble. At high Nile these barracks are a very few feet above the river level, and the level of the sub-soil water varies with the rise and fall of the river, and in consequence the ground floor rooms are very damp, so that they are left uninhabited. “During the autumn months men in-

Egypt.

"habiting these barracks seem subject to brief but sharp febrile attacks, which are probably due to damp and chill caused by high Nile in some way."

The medical officer in charge, Citadel Hospital, reports that "though there is no actual defect in drainage there is no doubt that old cesspits exist under the majority, if not, indeed, all, of the buildings in Cairo. These must cause a more or less impure state of the atmosphere in the various buildings, and is one great reason why it is unadvisable to occupy rooms on the ground floor. At period of high Nile the subsoil water closely approaches the surface, and must find its way into these numerous cesspits, and the diluted contents of these percolate far and wide into the surrounding loose and porous soil."

"On the subsidence of the Nile the river banks become gradually uncovered, as well as the surrounding country generally, and a large expanse of alluvial deposit is thus left exposed to the sun's rays. This state of things seems actually to cause a prevalence of attacks of fever among men at Kasr-el-Nil, and perhaps predisposes men in other barracks."

"The insanitary condition of the waste ground to the eastward of the Kasr-el-Nil barracks may cause some deterioration in the health of the troops occupying those barracks, but this is doubtful, especially as the prevailing winds are either northerly or southerly, and do not blow from this area towards the barracks."

The sanitary condition of Abbassiyeh is reported as fairly satisfactory. The barracks gave sufficient accommodation and are well ventilated. The water supply is obtained from the Nile and is conducted in iron pipes to the filter beds; improvement was effected in this direction during the year. With regard to drainage, the condition of a canal into which a drain, which carries waste water from wash-houses and kitchens, empties itself, is reported to be, at low Nile, insanitary, though the drain itself is in good working order.

The Principal Medical Officer, Frontier Field Force, reports of Assuan that "the want of suitable accommodation and appliances available at other hot stations, the tents or improved huts being totally inadequate, contributed materially to swell the sick list. This was especially so in the early part of the hot weather, during which was the greatest mortality, the young soldiers being chiefly the victims. All the men under 20 years of age and the weakly men were sent down the river in June with an immediate beneficial effect on the death rate. It took some time to train the natives to carry out properly an efficient system of sewage and refuse disposal. The water supply, too, was often taken for convenience from the river's bank, and the recommendations as to boiling and filtering were not effectually carried out, but on the whole I do not think that defects of drainage latrines or water supply were the most important factors in the spread of disease. The native vegetables supplied in the ration were generally badly cooked, and partly from prejudice, but chiefly from their want of an agreeable taste, were not used by the men. The meat, too, was often tough and tasteless. The clothing was suitable to the climate, which from the inequality of its diurnal range of temperature was extremely trying. Alcoholic stimulants were freely obtainable, and were indulged in to a prejudicial extent, it being considered a lesser evil to provide open canteens so as to prevent the men to use the very inferior and injurious kinds of liquor supplied them in the bazars."

The sanitary arrangements of other stations temporarily occupied by the force were carried out as far as possible, though at most of them they were imperfect; but all the stations south of Assuan were evacuated by British troops before the end of May.

At Suakim the sanitary conditions were generally satisfactory; no accumulation of rubbish, &c. was permitted, all drift on the foreshore was removed and carted away daily. The dry earth system of conservancy was carried out in a satisfactory manner. The foreshore to the south of Quarantine Island was at times submerged at high tide, and on the water receding offensive effluvia arose, the whole of this extent of shore was therefore filled in and raised. The men lived in double tents, which were covered over by a wooden framework roofed with matting, and about two feet above the tent itself, and the floors were boarded, so that there was free circulation of air above and below.

The accommodation was ample. Condensed water was used for all purposes, *Egypt*. and the allowance per man was 3 gallons for healthy men and 6 for patients, but the men really had a great deal more. The rations were as a rule very good, and consisted of $1\frac{1}{4}$ lb. of meat, $1\frac{1}{4}$ lb. bread, vegetables (onions and potatoes) $\frac{3}{4}$ lb., and pickles 1 oz., and jam 2 oz., issued on alternate days. For some time cheese was issued in the proportion of 2 oz. in lieu of $\frac{1}{4}$ lb. of meat, and was much appreciated by the men. Tea, coffee, pepper, sugar, salt, and lime juice $\frac{1}{4}$ oz. daily. The bread was very good.

*Troops on
Board Ship.*

XIV.—ON THE HEALTH OF THE TROOPS ON BOARD SHIP.

The troops embarked during the year, as shown in the returns received in the Army Medical Department, were:—

I. Troops proceeding on service abroad	-	-	-	24,442
II. Troops returning from abroad	-	-	-	15,325
III. Troops proceeding from one station abroad to another	-	-	-	11,172
IV. Invalids returning to England	-	-	-	2,590

I.—TROOPS PROCEEDING ON FOREIGN SERVICE.

The total number of warrant officers, non-commissioned officers, and men embarked for foreign service during the year was 24,442, the equivalent annual strength being 1,442. There were 1,892 admissions into hospital, and there was one death, being in the annual ratios of 1,312·0 and 69 per 1,000 respectively. Compared with the corresponding rates for the previous year, an increase of 275·4 per 1,000 is observed in the admission rate, and a decrease of 3·32 per 1,000 in the death rate; and in comparison with the average of similar rates for the preceding 10 years the ratio of admission is increased by 524·4 and that of mortality decreased by 2·88 per 1,000.

The admissions and deaths in the different classes and orders of diseases are shown in Abstract XXXIX.

GENERAL DISEASES.—*Specific Febrile Diseases.*—*Eruptive fevers* caused 7 admissions; of these 2 were cases of measles and 5 of epidemic rose rash; the latter occurred on H.M.S. "Serapis" towards the end of her voyage to Bombay in February, and are stated to have been of some severity.

Enteric Fever caused two admissions; one occurred on board the ss. "Hankow" shortly after embarkation, and the other on H.M.S. "Jumna," with fatal result. The cause of the disease was not discovered. *Other continued fevers* were the cause of 22 admissions, equal to a ratio of 15·3 per 1,000. The cases were mild in character.

Malarial Fevers show 6 admissions; of these 5 were cases of ague and 1 of remittent fever. They were all single cases in different ships.

Septic diseases were represented by two cases of erysipelas and one of phagedæna.

Syphilis, &c.—The admissions for primary syphilis were 380 in number, equal to a ratio of 263·5 per 1,000; the admissions for secondary syphilis were 61, or 42·3 per 1,000, and the admissions for gonorrhœa 410, or 284·3 per 1,000. The total ratio of the foregoing was 590·1 per 1,000, the admissions being 851. If to the above, 88 admissions for simple venereal ulcer are added a sum of 939 admissions is obtained, which gives a ratio for all forms of venereal disease of 651·2 per 1,000, which is just under half the total ratio for all diseases. The return for the previous year shows that the ratio for all forms of venereal disease was 536·9 per 1,000. There is therefore an increase of 114·3 per 1,000 in that of the year under report.

Debility is shown as the cause of 13 admissions, equal to 9·0 per 1,000 of strength, which is considerably below the corresponding ratio in the preceding year.

In the group of general diseases which are not classified *rheumatism* appears as the cause of 26 admissions, 4 only of which are returned as rheumatic fever. The ratio of admission, 18·0 per 1,000, is below that in the preceding year by 1·5. *Tubercular diseases* show only two admissions, cases of tubercle of the lung. *Other diseases* of this group caused 25 admissions, but none of the cases were of moment.

LOCAL DISEASES.—*Diseases of the Nervous System* caused only five admissions, of which four were for neuralgia and one for epilepsy.

Diseases of the Organs of Special Senses caused 37 admissions, of which 29 were for ophthalmic affections, chiefly conjunctivitis. Of the remainder, seven were for aural diseases and one for epistaxis.

Diseases of the Respiratory System.—123 admissions are returned, equal to a ratio of 85·3 per 1,000, which is considerably above the corresponding ratio in the preceding year. The admissions comprised 71 cases of bronchial affection, 43 of pneumonia, 8 of pleurisy, and 1 of hæmoptysis.

Diseases of the Digestive System caused 112 admissions, the ratio of prevalence being 77·7 per 1,000, slightly greater than in the preceding year. The causes of admission were very varied, but the principal were tonsillitis, sore throat, and dyspepsia.

Diseases of the Generative System caused 223 admissions, equal to 154·0 per 1,000. This high ratio is, of course, not comparable with those of previous years, as by the new nomenclature this order now embraces many diseases formerly shown under the urinary system, and also simple venereal ulcers of the generative organs.

Diseases of the Skin show 218 admissions, or 151·2 per 1,000, somewhat higher than in 1885. The cases were of small importance, and nearly two thirds were itch. The remaining orders of local diseases do not demand special mention.

Injuries.—115 are returned, being in the ratio of 79·8 per 1,000. Among the cases were 2 of sunstroke and 5 of fractures, the remainder being principally contusions, wounds, and sprains.

The *sanitary condition* of the vessels is generally reported to have been good, and the accommodation for the troops, except in one or two instances, sufficient.

II.—TROOPS RETURNING HOME FROM ABROAD.

The number of effective warrant officers, non-commissioned officers, and men who embarked for England during the year was 15,325, and the equivalent annual strength was 741. There were 744 admissions into hospital and 12 deaths, being in the respective annual ratios of 1004·0 and 16·16 per 1,000. Compared with corresponding ratios for the preceding year an increase of 138·1 per 1,000 is observed in that of admission, and one of 6·79 per 1,000 in that of mortality. Increase is also observed in these ratios when compared with those of the average of the preceding 10 years, being 277·3 per 1,000 in admission rate and 3·90 per 1,000 in death rate.

The admissions and deaths in the different classes and orders of diseases are shown in Abstract XXXIX.

GENERAL DISEASES.—*Specific Febrile Diseases.*—*Enteric fever* caused nine admissions but no death. The rate of prevalence was equal to 12·2 per 1,000. Seven of the cases occurred on H.M.S. "Himalaya" during the voyage from Alexandria to England in April, and one during her similar voyage in July. All these cases, it is said, were contracted in Egypt. The remaining case occurred on board the same ship during passage home from Gibraltar in November.

The admissions for *other continued fevers* were 37 in number, equal to a ratio of 49·9 per 1,000 of average annual strength, which is below the corresponding ratio in the preceding year by 29·8 per 1,000.

Cholera.—An outbreak of cholera took place on board H.M.S. "Euphrates" during her voyage from Bombay, in October, and commenced the day after departure. The number of cases was 6 and of deaths 4. The Medical Officer in charge states that the origin of the disease could not be distinctly traced, but it is known that cholera had recently existed in Khundwah when the troops halted there the day before arrival at Deolali; and orders were given that the troops should not be allowed to visit the bazar. The ship left Bombay on 16th October, and careful medical inspection of the men was made at Deolali the previous day, and also on board ship on the morning of the 17th. There was no prevalence of diarrhoea among the men. In the middle of the day on the 17th the first case occurred, a man being admitted from the main deck with vomiting and diarrhoea; he was a very weakly man and had suffered much from fever; he shortly became collapsed and died shortly after midnight. On the 18th, in the morning, a man was admitted from the lower deck; he soon became collapsed and died in the afternoon. Orders were now given that the troops should be kept on deck as much as

Troops on Board Ship.

possible, as well as the women and children, so as to have fresh air throughout the ship during the day. On the evening of the same day, however, two other cases occurred (one in a man who had been a voluntary attendant on one of the former cases); both of these men partially recovered from collapse, but relapsed and died. In consequence of these further cases it was arranged that the troops should be absolutely removed from the main and lower decks and should live and sleep on the upper deck; at the same time the bilges were thoroughly washed out with strong carbolic solution, the decks and sides of the ship being also treated with the same. On the 19th another case occurred but recovered gradually, and on the 22nd one more case occurred, which rapidly recovered, after which no more cases happened. Further disinfection of the ship was carried out, and the troops were by degrees allowed to occupy their former quarters.

Dysentery caused 15 admissions but no death; the ratio of admission was equal to 20·2 per 1,000.

Malarial Fevers show 91 admissions, equal to 122·8 per 1,000, which is a higher ratio than that in the preceding year by 50·6 per 1,000. Seven of the cases are returned as remittent fever and the remainder as ague. Of the former five cases, two of which were fatal, occurred on H.M.S. "Euphrates" during the voyage home in October, when cholera broke out as above described, and the medical officer was of opinion that these cases may have, to some extent, been due to the unavoidable exposure the men were subjected on account of the outbreak of cholera. Half of the cases of ague occurred in one ship, H.M.S. "Crocodile," in November and December, and were chiefly in men who had recently served in Quetta.

Syphilis caused 100 admissions for primary and 8 for secondary disease, the ratios per 1,000 being 135·0 and 10·8 respectively. The admissions for gonorrhœa were 109 in number, or 147·1 per 1,000. Adding to these admissions those which occurred for simple venereal ulcer a total of 247 is obtained, which gives an admission ratio of 333·3 per 1,000 for all forms of venereal disease as compared with 288·7 per 1,000 in the preceding year.

Under the head of *diseases produced by errors in diet* are shown 7 admissions, 4 of which were for alcoholism and 3 for delirium tremens.

Debility was the cause of 21 admissions, equal to a ratio of 28·3 per 1,000, being rather below the corresponding ratio in the preceding year.

Rheumatism shows 14 admissions, 2 only being cases of rheumatic fever. The admission ratio was 18·9 per 1,000, somewhat higher than in the preceding year.

Tubercular Diseases only caused two admissions.

LOCAL DISEASES.—*Diseases of the nervous system* caused only six admissions of which two were cases of apoplexy (both fatal), one of neuralgia, and three of epilepsy.

Diseases of the Organs of Special Senses caused 18 admissions; 14 of these were ophthalmic affections, mostly of a mild character, and the other 4 were diseases of the ear.

Diseases of the Respiratory System.—Under this head 36 admissions and one death are returned. The ratio of admission equals 48·6 per 1,000, which is higher than the corresponding rate in the preceding year. 24 of the admissions were due to bronchial affections and 6 to pneumonia, one of which was fatal.

Diseases of the Digestive System caused 65 admissions, the rate of prevalence being 87·7 per 1,000, considerably below the corresponding rate in the preceding year. The principal causes of admission were diarrhœa, hepatic affections, sore throat, and tonsillitis.

Diseases of the Generative System shows an admission rate of 60·7 per 1,000, a greatly increased ratio as compared with that in the foregoing year, with which it is no longer comparable, as this order now embraces many affections formerly classed under the urinary system, as well as simple venereal ulcers.

Diseases of the Skin caused an admission rate of 66·1 per 1,000; an advance on the previous year. The admissions were chiefly for ulcers and boils.

The remaining orders of local diseases show somewhat higher admission ratios than in the preceding year, but do not require special mention.

Injuries.—46 are recorded, equal to a rate of 62·1 per 1,000. There were two deaths from drowning. One man returning from Bombay committed

suicide by jumping overboard. Contusions, wounds, and sprains were the principal causes of admission. *Troops on Board Ship.*

The *sanitary condition* of the vessels was generally satisfactory, and the accommodation sufficient. In one instance there was some overcrowding in hospital on account of the number of invalids, but on representation, extra accommodation was afforded.

III.—TROOPS PROCEEDING FROM ONE STATION ABROAD TO ANOTHER.

The number of warrant officers, non-commissioned officers and men who embarked for voyages between one foreign station and another was 11,172, the equivalent annual strength of which was 324. The number of admissions into hospital was 340, and there was one death. The annual admission and mortality ratios were, therefore, 1049·3 and 3·09 per 1,000 respectively. Compared with corresponding ratios in the preceding year, there is an increase of admission equal to 67·8 per 1,000, and a decrease of mortality equal to 13·75 per 1,000; and in comparison with decennial average rates the admission rate has increased by 205·2, and the death rate has decreased by 3·95 per 1,000.

The admissions and deaths in the different classes and orders of diseases are given in Abstract XXXIX.

GENERAL DISEASES.—*Specific Febrile Diseases.*—*Eruptive fevers* are represented by a single case of epidemic rose rash, which occurred on H.M.S. "Serapis" between Gibraltar and Suez. *Continued fevers* caused 20 admissions, all of the simple form; the ratio per 1,000 equals 61·7, which is slightly lower than in the preceding year. One case only of *dysentery* is returned, and *malarial fevers* also are represented by a single case.

Syphilis, &c.—The admissions for primary syphilis were 96, and for the secondary form 8, being in the ratios of 296·3 and 24·7 per 1,000. Gonorrhœa caused 83 admissions, or 256·2 per 1,000. The ratio of admission for all forms of venereal disease is higher than that in the preceding year.

LOCAL DISEASES.—The admissions in the different orders were not numerous in any instance. *Nervous diseases* show three admissions, and one death from epilepsy. *Respiratory affections* caused 13 admissions, 4 for pneumonia, and the rest for bronchitis. The admissions for *diseases of the digestive system* were 33 in number, equal to a rate of 101·8 per 1,000. The cases were principally throat affections and diarrhœa. Among the remaining orders *affections of the generative system* show 21 admissions, and cutaneous diseases 13.

There were 18 admissions for injuries, more than half of which were wounds, the remainder being contusions, sprains, burns, &c.

The *sanitary condition* of the various vessels is satisfactorily reported on, and the accommodation provided appears to have been generally sufficient.

IV.—INVALIDS RETURNING TO ENGLAND.

The number of invalids embarked for England from foreign stations during the year was 2,590, among whom 11 deaths occurred at sea. These are accounted for in the tables showing the sickness and mortality of the Commands from which the men were invalided.

ABSTRACT No. 1.—TABLE showing the AVERAGE STRENGTH,
CONSTANTLY SICK among the TROOPS serving in the UNITED

Average Strength in Annual Returns, 92,601.		Admissions into Hospital.	Died.			Invalids Dis- charged the Service.	
†Average Strength, including Men detached, 94,501.			With the Regi- ment.	Absent from the Regi- ment.	Total.		
Diseases.							
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I.	Small-pox	11	—	—	—	—	
	Other Eruptive Fevers	598	2	—	2	—	
	Enteric Fever	145	43	—	43	—	
	Other Continued Fevers	842	8	—	8	—	
	Yellow Fever	—	—	—	—	—	
	Cholera	—	—	—	—	—	
	Dysentery	87	6	—	6	7	
	Other Diseases	191	1	—	1	—	
	Total	1,874	60	—	60	7	
Sub-Group II.—Malarial Fevers		562	—	—	—	4	
Sub-Group III.—Septic Diseases		251	5	—	5	2	
Sub-Group IV.	Syphilis, Primary	8,236	—	—	—	—	
	" Secondary	3,097	5	—	5	45	
	Gonorrhoea	10,632	—	—	—	2	
	Total	21,965	5	—	5	47	
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	
GROUP "B."							
Sub-Group I.—Parasitic Diseases		62	1	—	1	—	
Sub-Group II.	Scurvy	8	—	—	—	—	
	Alcoholism	308	5	2	7	—	
GROUP "C."							
Debility, &c.		755	1	—	1	130	
GROUP "D."							
Rheumatism		3,709	3	1	4	96	
Tubercular Diseases		362	94	17	111	151	
Other Diseases		443	7	3	10	27	
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System { Nervous Diseases Mental 2. Eye 3 & 4. Other Organs of Special Senses 5. Circulatory System 6. Respiratory 7. Digestive 8. Lymphatic and Glandular System 9. Urinary System 10. Generative 11. Organs of Locomotion 12. Connective Tissue 13. Skin	744 180 1,281 596 835 7,323 9,233 1,967 231 4,814 567 2,303 8,450	42 — — — 40 167 43 1 17 4 4 1 —	3 — — — 1 6 3 — 3 — — — —	45 — — — 50 173 46 1 20 4 4 1 —	133 124 77 50 298 157 115 5 16 24 89 11 20		
	III.—POISONS		21	4	—	4	—
	IV.—INJURIES.						
	1. General		18	31	3	34	1
	2. Local		8,960	44	1	45	97
	3. In Action		—	—	—	—	1
	No appreciable disease		277	—	—	—	—
	Cause unknown (refers to deaths only)		—	—	1	1	—
	General Total		78,089	538	44	632	1,667

* The average ratios for 10 years will be given in future years. The average ratios
1896 to 1897, in
† Ratios of deaths and invalids

ADMISSIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and KINGDOM during the Year 1886, with the Ratios per 1,000 of the Strength.

Average Number constantly Sick.	Ratio per 1,000.				*Average Ratio per 1,000 from 18 to 18			
	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
1'18	'1	—	—	'01	—	—	—	—
27'53	6'4	'02	—	'30	—	—	—	—
33'19	1'6	'46	—	'25	—	—	—	—
34'36	9'1	'09	—	'37	—	—	—	—
—	—	—	—	—	—	—	—	—
9'33	'9	'06	'07	'10	—	—	—	—
6'44	2'1	'01	—	'07	—	—	—	—
102'02	20'2	'64	'07	1'10	—	—	—	—
21'54	6'1	—	'04	'23	—	—	—	—
14'18	2'7	'05	'02	'13	—	—	—	—
717'36	88'9	—	—	7'75	—	—	—	—
240'21	33'5	'05	'48	2'59	—	—	—	—
652'44	114'8	—	'02	7'05	—	—	—	—
1610'01	237'2	'05	'50	17'39	—	—	—	—
—	—	—	—	—	—	—	—	—
1'53	'7	'01	—	'02	—	—	—	—
'65	'1	—	—	'01	—	—	—	—
7'81	3'3	'07	—	'06	—	—	—	—
54'78	8'2	'01	1'37	'58	—	—	—	—
233'99	40'1	'04	1'02	2'53	—	—	—	—
56'26	3'9	1'17	1'60	'61	—	—	—	—
27'22	4'8	'11	'29	'29	—	—	—	—
55'16	8'0	'48	1'46	'60	—	—	—	—
31'54	1'9	—	1'31	'34	—	—	—	—
74'40	13'8	—	'81	'80	—	—	—	—
33'28	6'4	—	'53	'36	—	—	—	—
75'89	9'0	'53	3'15	'82	—	—	—	—
368'99	79'1	1'83	1'45	3'88	—	—	—	—
286'96	90'7	'40	1'22	3'10	—	—	—	—
184'32	21'1	'01	'05	1'99	—	—	—	—
18'37	2'5	'21	'17	'30	—	—	—	—
274'79	52'0	'04	'25	2'97	—	—	—	—
46'18	6'1	'04	'34	'50	—	—	—	—
99'53	24'9	'01	'12	1'07	—	—	—	—
301'80	91'3	—	'22	3'26	—	—	—	—
'57	'2	'04	—	'01	—	—	—	—
'90	'2	'36	'01	'01	—	—	—	—
379'75	96'8	'48	1'03	4'10	—	—	—	—
—	—	—	'01	—	—	—	—	—
7'90	3'0	—	—	'03	—	—	—	—
—	—	'01	—	—	—	—	—	—
4360'31	843'3	6'68	17'64	47'08	—	—	—	—

for the year 1886 will be given in the Report for 1887; those for the two years that for 1888, &c., &c. calculated on this strength.

ABSTRACT A.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the NORTHERN DISTRICT during

Average Strength, 10,872.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	—	—	—	—
	Other Eruptive Fevers	39	—	—	1.73
	Enteric Fever	13	4	—	1.91
	Other Continued Fevers	106	—	—	2.96
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	7	—	1	.87
	Other Diseases	17	—	—	.89
Total		182	4	1	7.86
Sub-Group II.—Malarial Fevers		50	—	1	1.50
Sub-Group III.—Septic Diseases		15	—	—	.61
Sub-Group IV.	Syphilis, Primary	889	—	—	63.60
	" Secondary	392	—	8	26.43
	Gonorrhoea	1,307	—	1	66.26
Total		2,588	—	9	159.34
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		5	—	—	.11
Sub-Group II.	Scurvy	1	—	—	.01
	Alcoholism	27	—	—	.48
GROUP "C."					
Debility, &c.		104	1	21	5.16
GROUP "D."					
Rheumatism		408	1	14	23.44
Tubercular Diseases		23	9	12	3.08
Other Diseases		47	—	5	3.45
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System	{ Nervous Diseases	81	5	16	6.40
	{ Mental	15	—	16	3.46
	2. Eye	150	—	10	6.87
	3 & 4. Other Organs of Special Senses	59	—	3	2.46
	5. Circulatory System	82	6	23	6.03
	6. Respiratory	870	32	24	28.31
	7. Digestive	966	8	20	28.55
	8. Lymphatic and Glandular System	129	—	3	9.76
	9. Urinary System	53	1	—	2.53
	10. Generative	562	1	4	26.73
	11. Organs of Locomotion	60	—	14	4.18
	12. Connective Tissue	354	—	3	13.28
	13. Skin	1,053	—	4	33.53
III.—POISONS		1	—	—	.01
IV.—INJURIES.					
1. General		1	8	—	.01
2. Local		1,179	2	14	42.43
3. In Action		—	—	—	—
No appreciable disease		33	—	—	.88
Cause unknown (refers to deaths only)		—	—	—	—
General Total		9,063	78	230	431.14

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				*Average Ratio per 1,000 from 18 to 18 .			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
3.6	—	—	.16	—	—	—	—
1.2	.37	—	.18	—	—	—	—
9.7	—	—	.27	—	—	—	—
—	—	—	—	—	—	—	—
.6	—	.09	.08	—	—	—	—
1.6	—	—	.03	—	—	—	—
16.7	.37	.09	.72	—	—	—	—
4.6	—	.09	.14	—	—	—	—
1.4	—	—	.06	—	—	—	—
79.9	—	—	5.85	—	—	—	—
36.1	—	.74	2.44	—	—	—	—
120.2	—	.09	6.37	—	—	—	—
236.2	—	.83	14.66	—	—	—	—
—	—	—	—	—	—	—	—
.4	—	—	.01	—	—	—	—
.1	—	—	—	—	—	—	—
2.5	—	—	.04	—	—	—	—
9.6	.09	1.83	.47	—	—	—	—
37.6	.09	1.29	2.16	—	—	—	—
2.1	.83	1.10	.34	—	—	—	—
4.3	—	.46	.32	—	—	—	—
7.5	.46	1.47	.59	—	—	—	—
1.4	—	1.47	.32	—	—	—	—
13.8	—	.92	.63	—	—	—	—
5.4	—	.28	.23	—	—	—	—
7.5	.55	3.31	.55	—	—	—	—
80.0	2.94	2.21	3.52	—	—	—	—
88.9	.74	1.84	2.63	—	—	—	—
11.9	—	.28	.90	—	—	—	—
3.4	.09	—	.24	—	—	—	—
51.7	.03	.37	2.46	—	—	—	—
5.5	—	1.29	.38	—	—	—	—
32.6	—	.28	1.22	—	—	—	—
96.9	—	.37	3.08	—	—	—	—
.1	—	—	—	—	—	—	—
.1	.74	—	—	—	—	—	—
106.4	.18	1.28	3.90	—	—	—	—
—	—	—	—	—	—	—	—
3.0	—	—	.08	—	—	—	—
—	—	—	—	—	—	—	—
833.6	7.17	21.16	39.65	—	—	—	—

will be given in future years.

ABSTRACT B.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the EASTERN DISTRICT during

Average Strength, 5,084.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.				
I.—GENERAL DISEASES.				
GROUP "A."				
Sub-Group I.	Small-pox - - - - -	1	—	·07
	Other Eruptive Fevers - - - - -	45	—	1·23
	Enteric Fever - - - - -	8	1	·89
	Other Continued Fevers - - - - -	20	—	·39
	Yellow Fever - - - - -	—	—	—
	Cholera - - - - -	—	—	—
	Dysentery - - - - -	10	1	·91
	Other Diseases - - - - -	3	—	·08
	Total - - - - -	87	2	3·60
Sub-Group II.—Malarial Fevers - - - - -	22	—	—	·81
Sub-Group III.—Septic Diseases - - - - -	12	—	—	·40
Sub-Group IV.	Syphilis, Primary - - - - -	260	—	19·47
	" Secondary - - - - -	114	—	7·35
	Gonorrhoea - - - - -	730	—	36·05
	Total - - - - -	1,104	—	62·87
Sub-Group V.—Hydrophobia, &c. - - - - -	—	—	—	—
GROUP "B."				
Sub-Group I.—Parasitic Diseases - - - - -	4	—	—	·08
Sub-Group II.	Scurvy - - - - -	—	—	—
	Alcoholism - - - - -	8	—	·24
GROUP "C."				
Debility, &c. - - - - -	30	—	2	1·54
GROUP "D."				
Rheumatism - - - - -	217	—	9	11·78
Tubercular Diseases - - - - -	24	6	9	2·57
Other Diseases - - - - -	35	—	3	1·44
II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous System { Nervous Diseases - - - - -	51	2	5	2·59
{ Mental " - - - - -	23	—	20	2·95
2. Eye - - - - -	83	—	12	5·63
3 & 4. Other Organs of Special Senses - - - - -	33	—	1	1·36
5. Circulatory System - - - - -	80	1	26	4·58
6. Respiratory " - - - - -	393	5	—	13·95
7. Digestive " - - - - -	592	6	11	18·01
8. Lymphatic and Glandular System - - - - -	111	—	1	8·84
9. Urinary System - - - - -	16	2	1	·99
10. Generative " - - - - -	370	—	1	21·51
11. Organs of Locomotion - - - - -	49	—	9	2·83
12. Connective Tissue - - - - -	152	—	—	4·50
13. Skin - - - - -	523	—	3	17·51
III.—POISONS.				
IV.—INJURIES.				
1. General - - - - -	—	1	—	—
2. Local - - - - -	403	3	4	17·19
3. In Action - - - - -	—	—	—	—
No appreciable disease - - - - -	15	—	—	·39
Cause unknown (refers to deaths only) - - - - -	—	—	—	—
General Total - - - - -	4,451	28	121	208·16

* The average ratios for 10 years

ABSTRACT C.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the WESTERN DISTRICT during

Average Strength, 5,568.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	1	—	—	'09
	Other Eruptive Fevers	31	—	—	1'43
	Enteric Fever	7	2	—	1'02
	Other Continued Fevers	97	8	—	5'46
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	1	—	—	'30
	Other Diseases	13	—	—	'47
Total		150	10	—	8'77
Sub-Group II.—Malarial Fevers		38	—	1	2'06
Sub-Group III.—Septic Diseases		15	2	—	1'46
Sub-Group IV.	{ Syphilis, Primary	727	—	—	57'87
	{ " " Secondary	227	1	1	15'42
	{ Gonorrhoea	669	—	—	46'72
Total		1,653	1	1	120'01
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		7	—	—	'13
Sub-Group II.	{ Scurvy	—	—	—	—
	{ Alcoholism	34	—	—	1'23
GROUP "C."					
Debility, &c.		57	—	22	6'05
GROUP "D."					
Rheumatism		188	1	3	15'83
Tubercular Diseases		27	2	6	4'33
Other Diseases		9	1	2	'69
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		53	2	10	4'41
{ Mental "		8	—	5	1'53
2. Eye		90	—	6	5'63
3 & 4. Other Organs of Special Senses		45	—	2	3'22
5. Circulatory System		48	4	6	3'66
6. Respiratory "		406	14	5	18'70
7. Digestive		581	4	4	21'15
8. Lymphatic and Glandular System		50	—	—	3'16
9. Urinary System		12	2	—	'60
10. Generative "		103	—	—	5'98
11. Organs of Locomotion		39	2	3	3'40
12. Connective Tissue		142	—	—	5'34
13. Skin		617	—	—	19'56
III.—POISONS		7	1	—	'16
IV.—INJURIES.					
1. General		2	5	—	'02
2. Local		677	1	4	29'06
3. In Action		—	—	—	—
No appreciable disease		11	—	—	'18
Cause unknown (refers to deaths only)		—	—	—	—
General Total		5,069	52	80	226'31

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				*Average Ratio per 1,000 from 18 to 18 .			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
2	—	—	·02	—	—	—	—
5·6	—	—	·26	—	—	—	—
1·2	·36	—	·18	—	—	—	—
17·4	1·43	—	·98	—	—	—	—
—	—	—	—	—	—	—	—
·2	—	—	·05	—	—	—	—
2·3	—	—	·08	—	—	—	—
26·9	1·79	—	1·57	—	—	—	—
6·8	—	·18	·37	—	—	—	—
2·7	·36	—	·26	—	—	—	—
130·6	—	—	10·30	—	—	—	—
40·8	·18	·18	2·77	—	—	—	—
125·5	—	—	8·39	—	—	—	—
296·9	·18	·18	21·56	—	—	—	—
—	—	—	—	—	—	—	—
1·3	—	—	·02	—	—	—	—
6·1	—	—	·22	—	—	—	—
10·2	—	3·95	1·09	—	—	—	—
33·8	·18	·54	2·84	—	—	—	—
4·8	·36	1·08	·78	—	—	—	—
1·6	·18	·36	·12	—	—	—	—
9·5	·36	1·79	·79	—	—	—	—
1·4	—	·90	·28	—	—	—	—
16·2	—	1·08	1·01	—	—	—	—
8·1	—	·36	·58	—	—	—	—
8·6	·72	1·08	·68	—	—	—	—
73·9	2·51	·90	3·36	—	—	—	—
104·4	·72	·72	3·80	—	—	—	—
9·0	—	—	·57	—	—	—	—
2·2	·36	—	·11	—	—	—	—
18·5	—	—	1·08	—	—	—	—
7·0	·36	·54	·61	—	—	—	—
25·5	—	—	·96	—	—	—	—
110·8	—	—	3·51	—	—	—	—
1·3	1·18	—	·03	—	—	—	—
·3	·90	—	— \	—	—	—	—
131·6	·18	·72	5·22	—	—	—	—
2·0	—	—	·03	—	—	—	—
—	—	—	—	—	—	—	—
910·4	9·34	14·37	51·42	—	—	—	—

will be given in future years.

ABSTRACT D.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the SOUTHERN DISTRICT during

Average Strength, 9,164.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	1	—	—	·14
	Other Eruptive Fevers	165	1	—	8·62
	Enteric Fever	28	10	—	6·89
	Other Continued Fevers	58	—	—	4·06
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	25	3	—	2·47
	Other Diseases	8	—	—	·29
Total		285	14	—	22·47
Sub-Group II.—Malarial Fevers		118	—	1	3·84
Sub-Group III.—Septic Diseases		23	—	—	1·16
Sub-Group IV.	{ Syphilis, Primary	550	—	—	53·69
	{ " " Secondary	319	1	3	25·47
	{ Gonorrhoea	1,024	—	—	62·53
Total		1,893	1	3	141·98
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		7	—	—	·29
Sub-Group II.	{ Scurvy	3	—	—	·15
	{ Alcoholism	22	—	—	·63
GROUP "C."					
Debility, &c.		111	—	10	6·73
GROUP "D."					
Rheumatism		405	—	12	31·35
Tubercular Diseases		39	14	17	7·08
Other Diseases		40	—	—	1·58
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System {	Nervous Diseases	74	6	16	7·09
	Mental "	14	—	16	3·44
	2. Eye	140	—	10	8·16
	3 & 4. Other Organs of Special Senses	75	—	7	5·26
	5. Circulatory System	78	4	18	5·59
	6. Respiratory "	715	12	9	34·86
	7. Digestive	1,029	6	8	51·50
	8. Lymphatic and Glandular System	180	1	—	17·26
	9. Urinary System	29	2	1	1·83
	10. Generative "	841	1	2	55·71
	11. Organs of Locomotion	49	—	3	3·11
	12. Connective Tissue	192	—	—	10·32
	13. Skin	1,063	—	1	35·74
III.—POISONS.		7	—	—	·21
IV.—INJURIES.					
1. General		2	3	—	·15
2. Local		855	4	9	34·39
3. In Action		—	—	—	—
No appreciable disease		46	—	—	1·59
Cause unknown (refers to deaths only)		—	—	—	—
General Total		8,335	68	143	473·47

* The average ratios for 10 years

ABSTRACT E.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the CHATHAM DISTRICT

Average Strength, 3,334.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.				
I.—GENERAL DISEASES.				
GROUP "A."				
Sub-Group I.	Small-pox - - - - -	—	—	—
	Other Eruptive Fevers - - -	9	—	·35
	Enteric Fever - - - - -	—	—	—
	Other Continued Fevers - - -	20	—	·64
	Yellow Fever - - - - -	—	—	—
	Cholera - - - - -	—	—	—
	Dysentery - - - - -	3	—	·11
	Other Diseases - - - - -	6	—	·24
Total - - - - -				
38 - - - - -				
1·34				
Sub-Group II.—Malarial Fevers - - -				
13 - - - - -				
·53				
Sub-Group III.—Septic Diseases - - -				
7 - - - - -				
·84				
Sub-Group IV.	Syphilis, Primary - - - - -	210	—	20·40
	" Secondary - - - - -	87	—	7·09
	Gonorrhœa - - - - -	315	—	19·25
Total - - - - -				
612 - - - - -				
46·74				
Sub-Group V.—Hydrophobia, &c. - - -				
— - - - -				
GROUP "B."				
Sub-Group I.—Parasitic Diseases - - -				
2 - - - - -				
·02				
Sub-Group II.	Scurvy - - - - -	1	—	·07
	Alcoholism - - - - -	23	1	·62
GROUP "C."				
Debility, &c. - - - - -				
23 - - - - -				
3				
1·34				
GROUP "D."				
Rheumatism - - - - -				
118 - - - - -				
5				
6·78				
Tubercular Diseases - - - - -				
16 - - - - -				
6				
1·86				
Other Diseases - - - - -				
20 - - - - -				
4				
1·11				
II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous System	{ Nervous Diseases - - -	15	3	4
	{ Mental - - - - -	7	—	6
2. Eye - - - - -				
49 - - - - -				
9				
2·83				
3 & 4. Other Organs of Special Senses - - -				
21 - - - - -				
2				
1·18				
5. Circulatory System - - - - -				
33 - - - - -				
3				
2·91				
6. Respiratory " - - - - -				
238 - - - - -				
7				
13·89				
7. Digestive - - - - -				
372 - - - - -				
2				
12·15				
8. Lymphatic and Glandular System - - -				
71 - - - - -				
—				
6·45				
9. Urinary System - - - - -				
6 - - - - -				
1				
·26				
10. Generative " - - - - -				
197 - - - - -				
—				
10·25				
11. Organs of Locomotion - - - - -				
22 - - - - -				
—				
1·89				
12. Connective Tissue - - - - -				
72 - - - - -				
—				
3·87				
13. Skin - - - - -				
197 - - - - -				
2				
8·11				
III.—POISONS.				
2 - - - - -				
—				
·10				
IV.—INJURIES.				
1. General - - - - -				
3 - - - - -				
2. Local - - - - -				
277 - - - - -				
1				
·36				
3. In Action - - - - -				
— - - - -				
4				
13·22				
No appreciable disease - - - - -				
— - - - -				
·41				
Cause unknown (refers to deaths only) - - -				
— - - - -				
General Total - - - - -				
2,473 - - - - -				
19				
79				
141·39				

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				*Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.	Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
2·7	—	—	·11	—	—	—	—
6·0	—	—	·19	—	—	—	—
—	—	—	—	—	—	—	—
·9	—	—	·03	—	—	—	—
1·8	—	—	·07	—	—	—	—
11·4	—	—	·40	—	—	—	—
3·9	—	—	·16	—	—	—	—
2·1	—	—	·25	—	—	—	—
63·0	—	—	6·12	—	—	—	—
26·1	—	1·20	2·13	—	—	—	—
94·4	—	—	5·77	—	—	—	—
183·5	—	1·20	14·02	—	—	—	—
—	—	—	—	—	—	—	—
·6	—	—	·01	—	—	—	—
·3	—	—	·02	—	—	—	—
6·6	·30	—	·19	—	—	—	—
6·9	—	·90	·40	—	—	—	—
35·4	—	1·50	2·03	—	—	—	—
4·8	·30	1·80	·56	—	—	—	—
6·0	—	1·20	·33	—	—	—	—
4·5	·90	1·20	·30	—	—	—	—
2·1	—	1·80	·35	—	—	—	—
14·7	—	2·70	·88	—	—	—	—
6·3	—	·60	·35	—	—	—	—
9·9	·90	4·20	·87	—	—	—	—
71·4	2·10	·90	4·17	—	—	—	—
111·6	·60	2·40	3·65	—	—	—	—
21·3	—	—	1·93	—	—	—	—
1·8	·30	—	·08	—	—	—	—
59·1	—	—	3·07	—	—	—	—
6·6	—	1·20	·57	—	—	—	—
21·6	—	·30	1·16	—	—	—	—
59·1	—	·60	2·43	—	—	—	—
·6	—	—	·03	—	—	—	—
·9	—	—	·11	—	—	—	—
83·1	·30	1·20	3·97	—	—	—	—
—	—	—	·12	—	—	—	—
5·7	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
741·8	5·70	23·70	42·41	—	—	—	—

will be given in future years.

ABSTRACT F.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the SOUTH EASTERN DISTRICT during

Average Strength, 7,406.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	2	—	—	22
	Other Eruptive Fevers	83	—	—	4'31
	Enteric Fever	8	3	—	97
	Other Continued Fevers	35	—	—	1'71
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	8	1	—	53
	Other Diseases	13	—	—	68
	Total	149	4	—	8'32
Sub-Group II.—Malarial Fevers		72	—	—	2'49
Sub-Group III.—Septic Diseases		25	1	—	1'13
Sub-Group IV.	Syphilis, Primary	641	—	—	57'49
	" Secondary	248	—	1	23'39
	Gonorrhoea	808	—	—	40'26
	Total	1,697	—	1	130'14
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		4	—	—	30
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	41	1	—	1'05
GROUP "C."					
Debility, &c.		38	—	7	3'04
GROUP "D."					
Rheumatism		198	—	10	15'08
Tubercular Diseases		24	7	8	4'67
Other Diseases		46	2	2	3'68
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		52	4	14	4'19
{ Mental "		21	—	11	4'04
2. Eye		97	—	3	5'36
3 & 4. Other Organs of Special Senses		34	—	2	1'80
5. Circulatory System		106	3	50	14'23
6. Respiratory "		598	11	16	32'73
7. Digestive "		717	3	14	25'29
8. Lymphatic and Glandular System		109	—	—	13'14
9. Urinary System		12	1	2	1'26
10. Generative "		256	—	5	12'68
11. Organs of Locomotion		51	—	4	4'82
12. Connective Tissue		186	—	—	7'24
13. Skin		757	—	1	27'49
III.—POISONS		—	—	—	—
IV.—INJURIES.					
1. General		1	1	—	—
2. Local		784	4	10	34'90
3. In Action		—	—	—	—
No appreciable disease		19	—	—	55
Cause unknown (refers to deaths only)		—	—	—	—
General Total		6,094	42	160	359'62

* The average ratios for 10 years

ABSTRACT G.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the HOME DISTRICT during

Average Strength, 7,771.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	{ Small-pox	—	—	—	—
	{ Other Eruptive Fevers	46	—	—	1·81
	{ Enteric Fever	10	—	—	1·78
	{ Other Continued Fevers	74	—	—	2·18
	{ Yellow Fever	—	—	—	—
	{ Cholera	—	—	—	—
	{ Dysentery	8	—	1	1·12
	{ Other Diseases	13	—	—	·63
	Total -	150	—	1	7·49
Sub-Group II.—Malarial Fevers		46	—	—	1·87
Sub-Group III.—Septic Diseases		21	—	—	1·34
Sub-Group IV.	{ Syphilis, Primary	763	—	—	70·57
	{ " " Secondary	362	—	2	25·70
	{ Gonorrhoea	895	—	1	58·67
Total -		2,019	—	3	154·94
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		7	—	—	·12
Sub-Group II.	{ Scurvy	—	—	—	—
	{ Alcoholism	15	—	—	·49
GROUP "C."					
Debility, &c.		136	—	16	12·20
GROUP "D."					
Rheumatism		311	1	9	19·48
Tubercular Diseases		43	10	29	5·72
Other Diseases -		37	1	3	2·06
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System {	Nervous Diseases	83	2	14	4·59
	Mental " "	12	—	11	1·63
	2. Eye	111	—	6	6·86
	3 & 4. Other Organs of Special Senses	43	—	9	3·17
	5. Circulatory System	85	6	31	6·55
	6. Respiratory " "	828	18	22	40·06
	7. Digestive " "	722	—	13	21·69
	8. Lymphatic and Glandular System	186	—	—	18·75
	9. Urinary System	20	3	2	1·65
	10. Generative " "	367	—	3	23·63
	11. Organs of Locomotion	75	—	10	4·69
	12. Connective Tissue	276	1	2	12·96
	13. Skin	666	—	2	19·97
III.—POISONS.					
IV.—INJURIES.					
1. General		2	4	—	·09
2. Local		580	3	13	27·47
3. In Action		—	—	—	—
No appreciable disease		11	—	—	·25
Cause unknown (refers to deaths only)		—	—	—	—
General Total		6,842	40	202	400·12

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				* Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.	Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
5·9	—	—	·23	—	—	—	—
1·3	—	—	·23	—	—	—	—
9·5	—	—	·28	—	—	—	—
—	—	—	—	—	—	—	—
1·0	—	·13	·14	—	—	—	—
1·6	—	—	·08	—	—	—	—
19·3	—	·13	·96	—	—	—	—
5·9	—	—	·24	—	—	—	—
2·7	—	—	·17	—	—	—	—
98·0	—	—	9·08	—	—	—	—
46·6	—	·26	3·31	—	—	—	—
115·2	—	·13	7·55	—	—	—	—
269·8	—	·38	19·94	—	—	—	—
—	—	—	—	—	—	—	—
·9	—	—	·02	—	—	—	—
—	—	—	—	—	—	—	—
1·9	—	—	·06	—	—	—	—
17·5	—	2·06	1·57	—	—	—	—
40·0	·13	1·16	2·51	—	—	—	—
5·5	1·29	3·73	·74	—	—	—	—
4·8	·13	·88	·27	—	—	—	—
10·7	·26	1·80	·59	—	—	—	—
1·6	—	1·41	·21	—	—	—	—
14·3	—	·77	·83	—	—	—	—
5·5	—	1·16	·41	—	—	—	—
10·9	·77	3·99	·84	—	—	—	—
106·6	2·32	2·83	5·23	—	—	—	—
92·9	—	2·06	2·78	—	—	—	—
23·9	—	—	2·41	—	—	—	—
2·6	·38	·26	·20	—	—	—	—
47·2	—	·38	3·04	—	—	—	—
9·7	—	1·29	·60	—	—	—	—
35·5	·13	·26	1·67	—	—	—	—
84·4	—	·26	2·57	—	—	—	—
·3	·51	—	·01	—	—	—	—
74·6	·88	1·67	3·54	—	—	—	—
—	—	—	—	—	—	—	—
1·4	—	—	·03	—	—	—	—
—	—	—	—	—	—	—	—
880·4	6·30	25·99	51·49	—	—	—	—

will be given in future years.

ABSTRACT H.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the WOOLWICH DISTRICT during

Average Strength, 4,800.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	3	—	—	·24
	Other Eruptive Fevers	37	1	—	2·14
	Enteric Fevers	2	—	—	·69
	Other Continued Fevers	15	—	—	1·02
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	7	—	—	·90
Other Diseases		—	—	—	—
Total		64	1	—	4·99
Sub-Group II.—Malarial Fevers		36	—	—	1·70
Sub-Group III.—Septic Diseases		16	—	—	1·21
Sub-Group IV.	Syphilis, Primary	337	—	—	38·54
	" Secondary	187	2	3	17·68
	Gonorrhœa	477	—	—	39·79
Total		1,001	2	3	95·91
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		3	—	—	·07
Sub-Group II.	Scurvy, &c.	2	—	—	·36
	Alcoholism	14	—	—	·16
GROUP "C."					
Debility, &c.		14	—	2	1·58
GROUP "D."					
Rheumatism		285	—	3	18·52
Tubercular Diseases		18	7	6	1·98
Other Diseases		24	—	—	1·45
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		52	5	9	4·33
{ Mental "		11	—	10	3·30
2. Eye		43	—	3	3·07
3 & 4. Other Organs of Special Senses		29	—	4	1·92
5. Circulatory System		37	5	17	5·04
6. Respiratory "		426	14	17	22·16
7. Digestive "		444	3	3	18·72
8. Lymphatic and "Glandular System		126	—	—	15·08
9. Urinary System		12	1	1	1·21
10. Generative "		332	1	2	22·44
11. Organs of Locomotion		18	1	8	2·83
12. Connective Tissue		60	—	1	5·40
13. Skin		385	—	1	17·30
III.—POISONS		2	2	—	·06
IV.—INJURIES.					
1. General		—	—	—	—
2. Local		470	2	8	26·56
3. In Action		—	—	—	—
No appreciable disease		22	—	—	·84
Cause unknown (refers to deaths only)		—	—	—	—
General Total		3,956	44	98	278·18

* The average ratios for 10 years

ABSTRACT I.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the ALDERSHOT DISTRICT

Average Strength, 10,220.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	2	—	—	24
	Other Eruptive Fevers	38	—	—	123
	Enteric Fever	12	1	—	174
	Other Continued Fevers	55	—	—	313
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	3	—	—	33
	Other Diseases	29	1	—	122
Total		139	2	—	789
Sub-Group II.—Malarial Fevers		65	—	—	382
Sub-Group III.—Septic Diseases		48	1	—	192
Sub-Group IV.	Syphilis, Primary	1,699	—	—	151.76
	" Secondary	308	—	3	24.26
	Gonorrhœa	1,070	—	—	79.01
Total		3,077	—	3	255.03
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		11	1	—	25
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	34	—	—	82
GROUP "C."					
Debility, &c.		50	—	7	339
GROUP "D."					
Rheumatism		544	—	11	32.46
Tubercular Diseases		39	8	19	6.27
Other Diseases		67	2	5	4.39
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		75	2	12	4.37
{ Mental		8	—	4	.88
2. Eye		151	—	7	8.69
3 & 4. Other Organs of Special Senses		61	—	3	3.67
5. Circulatory System		95	3	35	8.75
6. Respiratory		868	14	9	44.50
7. Digestive		1,257	1	7	36.76
8. Lymphatic and Glandular System		384	—	—	38.52
9. Urinary System		22	2	2	2.71
10. Generative		437	—	2	26.90
11. Organs of Locomotion		63	—	11	3.95
12. Connective Tissue		238	—	1	10.40
13. Skin		618	—	1	34.38
III.—POISONS		1	—	—	.01
IV.—INJURIES.					
1. General		—	—	—	—
2. Local		1,023	8	10	46.37
3. In Action		—	—	—	—
No appreciable disease		21	—	—	.59
Cause unknown (refers to deaths only)		—	—	—	—
General Total		9,576	44	149	587.69

* The average ratios for 10 years

ABSTRACT J.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the NORTH BRITISH DISTRICT

Average Strength, 3,640.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	'Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	—	—	—	—
	Other Eruptive Fevers	10	—	—	·56
	Enteric Fever	7	—	—	1·15
	Other Continued Fevers	45	—	—	1·15
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	—	—	1	—
	Other Diseases	32	—	—	·78
Total -		94	—	1	3·64
Sub-Group II.—Malarial Fevers		10	—	—	·25
Sub-Group III.—Septic Diseases		17	—	—	1·06
Sub-Group IV.	Syphilis, Primary	207	—	—	15·79
	" " Secondary	76	—	1	4·69
	Gonorrhoea	321	—	—	15·25
Total -		604	—	1	35·73
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	9	—	—	·27
GROUP "C."					
Debility, &c.		13	—	1	1·64
GROUP "D."					
Rheumatism		130	—	2	7·79
Tubercular Diseases		11	3	3	1·71
Other Diseases		8	1	—	·26
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		18	1	3	2·05
{ Mental " "		7	—	1	·88
2. Eye		33	—	—	1·10
3 & 4. Other Organs of Special Senses		19	—	—	·66
5. Circulatory System		18	1	7	2·24
6. Respiratory " "		288	3	6	15·40
7. Digestive " "		303	3	4	8·25
8. Lymphatic and Glandular System		45	—	—	3·02
9. Urinary System		12	—	1	·87
10. Generative " "		147	—	1	6·68
11. Organs of Locomotion		16	—	1	2·24
12. Connective Tissue		73	—	—	3·60
13. Skin		316	—	1	9·76
III.—POISONS.					
IV.—INJURIES.					
1. General		1	2	—	·01
2. Local		367	2	4	13·72
3. In Action		—	—	—	—
No appreciable disease		14	—	—	·32
Cause unknown (refers to deaths only)		—	—	—	—
General Total		2,573	16	37	122·85

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				*Average Ratio per 1,000 from 18 to 18 .			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
2·7	—	—	·15	—	—	—	—
1·9	—	—	·32	—	—	—	—
12·4	—	—	·32	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
8·8	—	·27	·21	—	—	—	—
25·8	—	·27	1·00	—	—	—	—
2·7	—	—	·07	—	—	—	—
4·7	—	—	·29	—	—	—	—
56·8	—	—	4·34	—	—	—	—
20·9	—	·27	1·29	—	—	—	—
88·2	—	—	4·19	—	—	—	—
165·9	—	·27	9·82	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
2·5	—	—	·07	—	—	—	—
3·6	—	·27	·45	—	—	—	—
35·7	—	·55	2·14	—	—	—	—
3·0	·83	·83	·47	—	—	—	—
2·2	·27	—	·07	—	—	—	—
5·0	·27	·83	·56	—	—	—	—
1·9	—	·27	·24	—	—	—	—
9·1	—	—	·30	—	—	—	—
5·2	—	—	·13	—	—	—	—
5·0	·27	1·92	·62	—	—	—	—
79·1	·85	1·65	4·23	—	—	—	—
83·2	·83	1·10	2·26	—	—	—	—
12·4	—	—	·83	—	—	—	—
3·3	—	·27	·24	—	—	—	—
40·4	—	·27	1·81	—	—	—	—
4·4	—	·27	·62	—	—	—	—
20·1	—	—	·99	—	—	—	—
86·8	—	·27	2·68	—	—	—	—
—	—	—	—	—	—	—	—
·3	·55	—	—	—	—	—	—
100·8	·55	1·10	3·77	—	—	—	—
—	—	—	—	—	—	—	—
3·8	—	—	·09	—	—	—	—
—	—	—	—	—	—	—	—
706·9	4·40	10·16	33·75	—	—	—	—

will be given in future years.

ABSTRACT K.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the CHANNEL ISLANDS during the Year

Average Strength, 1,361.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	{ Small-pox	—	—	—	—
	{ Other Eruptive Fevers	6	—	—	.23
	{ Enteric Fever	—	—	—	—
	{ Other Continued Fevers	5	—	—	.20
	{ Yellow Fever	—	—	—	—
	{ Cholera	—	—	—	—
	{ Dysentery	2	—	—	.10
{ Other Diseases		—	—	—	—
Total		15	—	—	.52
Sub-Group II.—Malarial Fevers		2	—	—	.08
Sub-Group III.—Septic Diseases		—	—	—	—
Sub-Group IV.	{ Syphilis, Primary	112	—	—	10.75
	{ " Secondary	26	—	—	1.87
	{ Gonorrhoea	146	—	—	8.98
Total		284	—	—	21.60
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		—	—	—	—
Sub-Group II.	{ Scurvy	—	—	—	—
	{ Alcoholism	4	2	—	.05
GROUP "C."					
Debility, &c.		7	—	—	.45
GROUP "D."					
Rheumatism		27	—	2	2.18
Tubercular Diseases		5	2	1	.93
Other Diseases		5	—	—	.23
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		9	2	1	.93
{ Mental "		—	—	—	—
2. Eye		23	—	—	1.88
3 & 4. Other Organs of Special Senses		6	—	—	.18
5. Circulatory System		6	—	—	.24
6. Respiratory "		51	2	—	2.82
7. Digestive "		73	2	—	2.57
8. Lymphatic and Glandular System		11	—	—	1.66
9. Urinary System		—	—	—	—
10. Generative "		69	—	—	3.38
11. Organs of Locomotion		4	—	—	.46
12. Connective Tissue		18	—	—	.66
13. Skin		84	—	—	3.23
III.—POISONS.					
IV.—INJURIES.					
1. General		—	1	—	—
2. Local		105	—	—	3.00
3. In Action		—	—	—	—
No appreciable disease		2	—	—	.07
Cause unknown (refers to deaths only)		—	—	—	—
General Total		808	11	4	47.72

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK
1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				* Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.	Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
4'4	—	—	'16	—	—	—	—
3'7	—	—	'15	—	—	—	—
—	—	—	—	—	—	—	—
1'5	—	—	'07	—	—	—	—
—	—	—	—	—	—	—	—
9'6	—	—	'33	—	—	—	—
1'5	—	—	'06	—	—	—	—
—	—	—	—	—	—	—	—
82'3	—	—	7'90	—	—	—	—
19'1	—	—	1'37	—	—	—	—
107'3	—	—	6'60	—	—	—	—
208'7	—	—	15'87	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
2'9	1'47	—	'04	—	—	—	—
—	—	—	—	—	—	—	—
5'1	—	—	'33	—	—	—	—
19'8	—	1'47	1'60	—	—	—	—
3'7	1'47	'73	'68	—	—	—	—
3'7	—	—	'17	—	—	—	—
—	—	—	—	—	—	—	—
6'6	1'47	'73	'68	—	—	—	—
—	—	—	—	—	—	—	—
16'9	—	—	1'38	—	—	—	—
4'4	—	—	'13	—	—	—	—
4'4	—	—	'18	—	—	—	—
37'5	1'47	—	2'07	—	—	—	—
53'6	1'47	—	1'89	—	—	—	—
8'1	—	—	1'22	—	—	—	—
—	—	—	—	—	—	—	—
50'7	—	—	2'48	—	—	—	—
2'9	—	—	'34	—	—	—	—
13'2	—	—	'49	—	—	—	—
61'7	—	—	2'37	—	—	—	—
—	—	—	—	—	—	—	—
—	'73	—	—	—	—	—	—
77'2	—	—	2'65	—	—	—	—
—	—	—	—	—	—	—	—
1'5	—	—	'05	—	—	—	—
—	—	—	—	—	—	—	—
593'7	8'08	2'94	35'06	—	—	—	—

will be given in future years.

ABSTRACT L.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the BELFAST DISTRICT during

Average Strength, 3,550.		Admissions into Hospital.	Deaths.	Invalids Dis- charged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	—	—	—	—
	Other Eruptive Fevers	5	—	—	16
	Enteric Fever	—	—	—	—
	Other Continued Fevers	47	—	—	95
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	3	—	2	18
	Other Diseases	24	—	—	52
Total		79	—	2	181
Sub-Group II.—Malarial Fevers		10	—	—	14
Sub-Group III.—Septic Diseases		15	—	2	123
Sub-Group IV.	Syphilis, Primary	242	—	—	1500
	Secondary	104	—	9	881
	Gonorrhoea	479	—	—	2212
Total		825	—	9	4593
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		2	—	—	01
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	5	—	—	15
GROUP "C."					
Debility, &c.		19	—	10	76
GROUP "D."					
Rheumatism		107	—	2	441
Tubercular Diseases		8	5	2	128
Other diseases		9	—	—	42
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		10	1	1	43
Mental		9	—	4	95
2. Eye		31	—	—	163
3 & 4. Other Organs of Special Senses		16	—	—	56
5. Circulatory System		24	2	11	147
6. Respiratory		163	8	4	831
7. Digestive		223	1	5	422
8. Lymphatic and Glandular System		106	—	—	759
9. Urinary System		5	—	—	25
10. Generative		237	1	2	1247
11. Organs of Locomotion		20	—	1	76
12. Connective Tissue		82	—	2	264
13. Skin		279	—	2	808
III.—POISONS		—	1	—	—
IV.—INJURIES.					
1. General		3	3	—	16
2. Local		248	3	1	802
3. In action		—	—	—	—
No appreciable disease		14	—	—	42
Cause unknown (refers to deaths only)		—	—	—	—
General Total		2,554	25	60	11410

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratios per 1,000.				*Average Ratio per 1,000 from 18 to 18 .			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
1·4	—	—	·04	—	—	—	—
13·2	—	—	·27	—	—	—	—
—	—	—	—	—	—	—	—
·8	—	·56	·05	—	—	—	—
6·8	—	—	·15	—	—	—	—
22·2	—	·56	·51	—	—	—	—
2·8	—	—	·04	—	—	—	—
4·2	—	·56	·35	—	—	—	—
68·2	—	—	4·23	—	—	—	—
29·3	—	2·54	2·48	—	—	—	—
134·9	—	—	6·23	—	—	—	—
232·4	—	2·54	12·94	—	—	—	—
—	—	—	—	—	—	—	—
·6	—	—	—	—	—	—	—
1·4	—	—	·04	—	—	—	—
5·4	—	2·82	·21	—	—	—	—
30·1	—	·56	1·24	—	—	—	—
2·3	1·41	·56	·36	—	—	—	—
2·5	—	—	·12	—	—	—	—
2·8	·28	·28	·12	—	—	—	—
2·5	—	1·13	·27	—	—	—	—
8·7	—	—	·46	—	—	—	—
4·5	—	—	·16	—	—	—	—
6·8	·56	3·11	·41	—	—	—	—
47·3	2·25	1·13	2·34	—	—	—	—
62·8	·28	1·41	1·19	—	—	—	—
29·9	—	—	2·14	—	—	—	—
1·4	—	—	·07	—	—	—	—
66·8	·28	·56	3·51	—	—	—	—
5·6	—	·28	·21	—	—	—	—
23·1	—	·56	·74	—	—	—	—
78·6	—	·56	2·28	—	—	—	—
—	·28	—	—	—	—	—	—
·8	·85	—	·05	—	—	—	—
69·9	·85	·28	2·20	—	—	—	—
—	—	—	—	—	—	—	—
4·0	—	—	·12	—	—	—	—
—	—	—	—	—	—	—	—
719·4	7·04	16·00	32·14	—	—	—	—

will be given in future years.

ABSTRACT M.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the DUBLIN DISTRICT during

Average Strength, 8,143.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases					
I.—GENERAL DISEASES.					
GROUP "A"					
Sub-Group I.	Small-pox	—	—	—	—
	Other Eruptive Fevers	32	—	—	2·03
	Enteric Fever	20	12	—	1·84
	Other Continued Fevers	117	—	—	5·24
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	4	1	1	·92
	Other Diseases	12	—	—	·64
Total		185	13	1	10·67
Sub-Group II.—Malarial Fevers		34	—	—	·76
Sub-Group III.—Septic Diseases		15	—	—	·80
Sub-Group IV.	Syphilis, Primary	1,055	—	—	84·78
	" Second	413	—	4	30·58
	Gonorrhœa	1,457	—	—	83·29
Total		2,925	—	4	198·65
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		4	—	—	·04
Sub-Group II.	Scurvy	—	—	—	·05
	Alcoholism	19	—	—	·76
GROUP "C."					
Debility, &c.		78	—	16	6·20
GROUP "D."					
Rheumatism		385	—	7	24·44
Tubercular Diseases		46	11	19	8·85
Other Diseases		39	—	—	2·22
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System	{ Nervous Diseases	93	2	18	6·33
	{ Mental	23	—	12	4·21
	2. Eye	94	—	6	4·99
	3 & 4. Other Organs of Special Senses	55	—	8	3·38
	5. Circulatory System	70	6	20	6·40
	6. Respiratory	704	15	11	34·36
	7. Digestive	821	1	10	27·00
	8. Lymphatic and Glandular System	533	—	—	29·27
	9. Urinary System	28	1	3	2·38
	10. Generative	455	—	2	24·64
	11. Organs of Locomotion	42	1	13	5·57
	12. Connective Tissue	191	—	1	7·43
	13. Skin	672	—	1	26·43
III.—POISONS.					
IV.—INJURIES.					
1. General		—	2	—	—
2. Local		789	5	8	31·79
3. In Action		—	—	1	—
No appreciable disease		17	—	—	·48
Cause unknown (refers to deaths only)		—	—	—	—
General Total		8,097	57	161	468·09

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				* Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.	Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
3·9	—	—	·25	—	—	—	—
2·4	1·47	—	·23	—	—	—	—
14·4	—	—	·64	—	—	—	—
—	—	—	—	—	—	—	—
·5	·12	·12	·11	—	—	—	—
1·5	—	—	·08	—	—	—	—
22·7	1·59	·12	1·31	—	—	—	—
4·2	—	—	·09	—	—	—	—
1·8	—	—	·10	—	—	—	—
129·6	—	—	10·41	—	—	—	—
50·7	—	·49	3·75	—	—	—	—
178·9	—	—	10·23	—	—	—	—
369·2	—	·49	24·39	—	—	—	—
—	—	—	—	—	—	—	—
·5	—	—	—	—	—	—	—
—	—	—	·01	—	—	—	—
2·3	—	—	·09	—	—	—	—
9·6	—	1·97	·76	—	—	—	—
47·3	—	·86	3·00	—	—	—	—
5·6	1·35	2·33	1·09	—	—	—	—
4·8	—	—	·27	—	—	—	—
11·4	·25	2·21	·78	—	—	—	—
2·8	—	1·47	·52	—	—	—	—
11·5	—	·74	·61	—	—	—	—
6·8	—	·98	·42	—	—	—	—
8·6	·74	2·46	·79	—	—	—	—
86·5	1·84	1·35	4·22	—	—	—	—
100·8	·12	1·23	3·32	—	—	—	—
40·9	—	—	3·59	—	—	—	—
3·4	·12	·37	·29	—	—	—	—
55·9	—	·25	3·03	—	—	—	—
5·2	·13	1·60	·68	—	—	—	—
23·5	—	·12	·91	—	—	—	—
82·5	—	·12	3·25	—	—	—	—
—	·25	—	—	—	—	—	—
94·4	·61	·98	3·90	—	—	—	—
—	—	·12	—	—	—	—	—
2·1	—	—	·06	—	—	—	—
—	—	—	—	—	—	—	—
994·3	7·00	19·77	57·48	—	—	—	—

will be given in future years.

ABSTRACT N.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in the CORK DISTRICT, during

Average Strength, 8,378.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	1	—	—	.13
	Other Eruptive Fevers	48	—	—	1.57
	Enteric Fever	27	9	—	3.98
	Other Continued Fevers	120	—	—	4.63
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	5	—	—	.46
	Other Diseases	20	—	—	.42
Total		221	9	—	11.24
Sub-Group II.—Malarial Fevers		33	—	1	1.35
Sub-Group III.—Septic Diseases		18	—	—	.71
Sub-Group IV.	Syphilis, Primary	363	—	—	25.71
	" Secondary	179	1	2	15.98
	Gonorrhœa	633	—	—	39.89
Total		1,175	1	2	81.58
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		5	—	—	.09
Sub-Group II.	Scurvy	1	—	—	.01
	Alcoholism	40	1	—	.54
GROUP "C."					
Debility, &c.		61	—	11	3.84
GROUP "D."					
Rheumatism		292	—	4	15.75
Tubercular Diseases		29	6	11	3.70
Other Diseases		44	—	—	2.73
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System	{ Nervous Diseases	44	3	6	3.71
	{ Mental	15	—	8	2.91
2. Eye		153	—	4	9.74
3 & 4. Other Organs of Special Senses		56	—	5	2.32
5. Circulatory System		46	4	18	4.66
6. Respiratory		565	12	7	27.12
7. Digestive		829	1	3	21.67
8. Lymphatic and Glandular System		77	—	1	6.15
9. Urinary System		12	1	1	1.05
10. Generative		263	—	—	10.77
11. Organs of Locomotion		42	—	4	3.64
12. Connective Tissue		192	—	—	8.44
13. Skin		735	—	2	27.73
III.—POISONS.					
IV.—INJURIES.					
1. General		2	1	1	.09
2. Local		899	3	7	38.03
3. In Action		—	—	—	—
No appreciable disease		24	—	—	.74
Cause unknown (refers to deaths only)		—	—	—	—
General Total		5,873	42	96	290.21

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1886, with the Ratios per 1,000 of the Strength.

Ratio per 1,000.				* Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Con- stantly Sick.	Admis- sions.	Deaths.	Invalids Dis- charged the Service.	Con- stantly Sick.
.1	—	—	.08	—	—	—	—
5.7	—	—	.19	—	—	—	—
3.2	1.07	—	.48	—	—	—	—
14.3	—	—	.55	—	—	—	—
—	—	—	—	—	—	—	—
.6	—	—	.05	—	—	—	—
2.4	—	—	.65	—	—	—	—
26.3	1.07	—	1.34	—	—	—	—
3.9	—	.12	.16	—	—	—	—
2.1	—	—	.08	—	—	—	—
43.3	—	—	3.07	—	—	—	—
21.4	.12	.24	1.01	—	—	—	—
75.6	—	—	4.76	—	—	—	—
140.3	.12	.24	9.74	—	—	—	—
—	—	—	—	—	—	—	—
.6	—	—	.01	—	—	—	—
.1	—	—	—	—	—	—	—
4.8	.12	—	.06	—	—	—	—
7.3	—	1.31	.46	—	—	—	—
34.9	—	.48	1.88	—	—	—	—
3.5	.72	1.31	.44	—	—	—	—
5.3	—	—	.33	—	—	—	—
5.3	.36	.72	.44	—	—	—	—
1.8	—	.95	.35	—	—	—	—
18.3	—	.48	1.16	—	—	—	—
6.7	—	.60	.28	—	—	—	—
5.5	.48	2.15	.56	—	—	—	—
67.4	1.43	.83	3.24	—	—	—	—
96.9	.12	.36	2.57	—	—	—	—
9.2	—	.12	.73	—	—	—	—
1.4	.12	.12	.13	—	—	—	—
31.4	—	—	1.29	—	—	—	—
5.0	—	.48	.43	—	—	—	—
22.9	—	—	1.01	—	—	—	—
87.7	—	.24	3.31	—	—	—	—
—	—	—	—	—	—	—	—
.8	.12	.12	.01	—	—	—	—
107.3	.36	.63	4.54	—	—	—	—
—	—	—	—	—	—	—	—
2.9	—	—	.09	—	—	—	—
—	—	—	—	—	—	—	—
701.0	5.01	11.46	34.64	—	—	—	—

will be given in future years.

ABSTRACT O.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the Troops stationed in the CURRAGH DISTRICT

Average Strength, 3,311.		Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
Diseases.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	—	—	—	—
	Other Eruptive Fevers	4	—	—	'10
	Enteric Fever	3	1	—	'35
	Other Continued Fevers	23	—	—	'64
	Yellow Fever	—	—	—	—
	Cholera	1	—	—	'13
	Dysentery	2	—	—	'19
Other Diseases		—	—	—	—
Total		38	1	—	1'41
Sub-Group II.—Malarial Fevers		13	—	—	'34
Sub-Group III.—Septic Diseases		4	1	—	'31
Sub-Group IV.	Syphilis, Primary	202	—	—	31'94
	" Secondary	55	—	—	5'54
	Gonorrhoea	271	—	—	22'08
Total		528	—	—	59'56
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		1	—	—	'01
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	14	—	—	'32
GROUP "C."					
Debility, &c.		14	—	2	'86
GROUP "D."					
Rheumatism		93	—	3	4'70
Tubercular Diseases		10	3	3	1'63
Other Diseases		23	—	3	1'51
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		34	2	9	2'74
" Mental		2	—	—	'21
2. Eye.		34	—	1	1'87
3 & 4. Other Organs of Special Senses		39	—	4	2'34
5. Circulatory System		27	1	9	3'54
6. Respiratory		205	—	4	11'23
7. Digestive		304	2	2	9'63
8. Lymphatic and Glandular System		39	—	—	5'67
9. Urinary System		8	—	2	'83
10. Generative		188	—	—	11'07
11. Organs of Locomotion		27	—	4	1'81
12. Connective Tissue		55	—	—	3'45
13. Skin		290	—	—	12'90
III.—POISONS		1	—	—	'02
IV.—INJURIES.					
1. General		1	—	—	'01
2. Local		324	3	1	13'01
3. In Action		—	—	—	—
No appreciable disease		9	—	—	'19
Cause unknown (refers to deaths only)		—	—	—	—
General Total		2,325	13	47	151'26

* The average ratios for 10 years

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the ratios per 1,000 of the Strength.

Ratio per 1,000.				* Average Ratio per 1,000 from 18 to 18 .			
Admis- sions.	Deaths.	Invalids dis- charged the Service.	Constantly Sick.	Admis- sions.	Deaths.	Invalids dis- charged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
1·2	—	—	·03	—	—	—	—
·9	·30	—	·11	—	—	—	—
8·5	—	—	·19	—	—	—	—
—	—	—	—	—	—	—	—
·3	—	—	·04	—	—	—	—
·6	—	—	·06	—	—	—	—
11·5	·30	—	·43	—	—	—	—
3·9	—	—	·10	—	—	—	—
1·2	·30	—	·09	—	—	—	—
61·0	—	—	9·65	—	—	—	—
16·6	—	—	1·87	—	—	—	—
81·9	—	—	6·87	—	—	—	—
159·5	—	—	17·99	—	—	—	—
—	—	—	—	—	—	—	—
·3	—	—	—	—	—	—	—
4·2	—	—	·10	—	—	—	—
4·2	—	·60	·26	—	—	—	—
23·1	—	·91	1·42	—	—	—	—
3·0	·91	·91	·49	—	—	—	—
6·9	—	·91	·46	—	—	—	—
10·3	·60	2·72	·83	—	—	—	—
·6	—	·30	·06	—	—	—	—
10·3	—	·30	·66	—	—	—	—
11·8	—	1·21	·71	—	—	—	—
8·2	·30	2·72	1·07	—	—	—	—
61·9	—	1·21	3·39	—	—	—	—
91·8	·60	·60	2·91	—	—	—	—
11·8	—	—	1·71	—	—	—	—
2·4	—	·60	·25	—	—	—	—
56·8	—	—	3·34	—	—	—	—
8·2	—	1·21	·55	—	—	—	—
16·6	—	—	1·04	—	—	—	—
87·6	—	—	3·92	—	—	—	—
·3	—	—	·01	—	—	—	—
·3	—	—	—	—	—	—	—
97·8	·91	·30	3·93	—	—	—	—
—	—	—	·06	—	—	—	—
2·7	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
702·2	3·92	14·20	45·68	—	—	—	—

will be given in future years.

ABSTRACT P.—TABLE showing the AVERAGE STRENGTH, SICKNESS, UNITED KINGDOM in 1886, with

Average Strength.		Officers, 3,644.			
Diseases.		Attacks of Illness.	Deaths.	Ratios per 1,000.	
				Attacks.	Deaths.
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I.	Small-pox	1	—	·3	—
	Other Eruptive Fevers	38	—	10·4	—
	Enteric Fever	15	1	4·1	·27
	Other Continued Fevers	31	—	8·5	—
	Yellow Fever	—	—	—	—
	Cholera	—	—	—	—
	Dysentery	2	—	·6	—
	Other Diseases	22	—	6·0	—
Total		109	1	29·9	·27
Sub-Group II.—Malarial Fevers		27	1	7·4	·27
Sub-Group III.—Septic Diseases		4	—	1·1	—
Sub-Group IV.	Syphilis, Primary	6	—	1·6	—
	" Secondary	7	—	1·9	—
	Gonorrhoea	41	—	11·3	—
Total		54	—	14·8	—
Sub-Group V.—Hydrophobia, &c.		—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases		—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—
	Alcoholism	—	—	—	—
GROUP "C."					
Debility, &c.		25	—	6·8	—
GROUP "D."					
Rheumatism		62	—	17·0	—
Tubercular Diseases		1	1	·3	·27
Other Diseases		7	2	1·9	·55
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System { Nervous Diseases		29	1	8·0	·27
Mental " "		—	—	—	—
2. Eye		17	—	4·7	—
3 & 4. Other Organs of Special Senses		2	—	·6	—
5. Circulatory System		7	2	1·9	·55
6. Respiratory " "		190	6	52·1	1·65
7. Digestive " "		243	5	66·7	1·38
8. Lymphatic and Glandular System		17	—	4·7	—
9. Urinary System		11	4	3·0	1·10
10. Generative " "		18	—	4·9	—
11. Organs of Locomotion		16	—	4·4	—
12. Connective Tissue		29	—	8·0	—
13. Skin		68	—	18·7	—
III.—POISONS					
IV.—INJURIES.					
1. General		3	—	·8	—
2. Local		237	—	65·0	—
3. In Action		—	—	—	—
No appreciable disease		1	—	·3	—
Cause unknown (refers to deaths only)		—	—	—	—
General Total		1,177	23	323·0	6·31

and MORTALITY among the OFFICERS, WOMEN, and CHILDREN in the the Ratios per 1,000 of the Strength.

Women, 9,448.				Children, 17,364.			
Attacks of Illness.	Deaths.	Ratios per 1,000.		Attacks of Illness.	Deaths.	Ratios per 1,000.	
		Attacks.	Deaths.			Attacks.	Deaths.
—	—	—	—	2	1	·1	·06
36	—	3·8	—	1,654	65	95·2	3·74
4	2	·4	·21	12	1	·7	·06
89	—	9·4	—	192	3	11·1	·17
—	—	—	—	—	—	—	—
4	—	·4	—	15	2	·9	·11
12	—	1·3	—	571	25	32·9	1·44
145	2	15·3	·21	2,446	97	140·9	5·58
30	—	3·2	—	13	1	·7	·06
22	1	2·3	·11	16	1	·9	·06
—	—	—	—	—	—	—	—
7	—	·8	—	18	6	1·0	·35
—	—	—	—	—	—	—	—
7	—	·8	—	18	6	1·0	·35
—	—	—	—	—	—	—	—
5	—	·5	—	93	1	5·4	·06
—	—	—	—	1	—	—	—
2	—	·2	—	—	—	—	—
619	1	65·5	·11	388	63	22·3	3·63
195	1	20·7	·11	34	—	2·0	—
57	17	6·1	1·79	61	37	3·5	2·13
73	3	7·7	·32	93	6	5·4	·35
176	3	18·6	·32	270	96	15·5	5·64
3	1	·3	·11	—	—	—	—
32	—	3·4	—	148	—	8·5	—
12	—	1·3	—	34	—	2·0	—
40	—	4·2	—	15	2	·9	·11
730	17	77·3	1·79	2,183	142	125·7	8·17
781	3	82·7	·32	1,260	67	72·6	3·86
18	1	1·9	·11	36	—	2·1	—
21	3	2·2	·32	5	—	·3	—
427	11	45·2	1·16	16	—	1·0	—
24	—	2·6	—	38	—	2·2	—
71	—	7·5	—	97	—	5·6	—
91	—	9·6	—	559	—	32·2	—
—	—	—	—	1	1	—	·06
—	—	—	—	5	9	·3	·52
56	1	5·9	·11	208	3	15·3	·17
—	—	—	—	—	—	—	—
2	—	·2	—	4	—	·2	—
—	—	—	—	—	—	—	—
3,639	65	383·2	6·88	8,100	534	466·5	30·75

ABSTRACT No. II.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at GIBRALTAR during the Year 1886, with the Ratios

Average Strength, 4,307.		Admissions into Hospital.	Deaths.			Invalids.		Average Number constantly Sick.
Diseases.	In the Com- mand.		Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.		
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	1	—	—	—	—	—	12
	Enteric Fever	158	26	—	26	58	—	25'84
	Other Continued Fevers	173	—	—	—	10	—	20'87
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	—	—	—	—	—	—	06
	Other Diseases	—	—	—	—	—	—	—
Total		332	26	—	26	68	—	46'89
Sub-Group II.—Malarial Fevers		22	—	—	—	—	1	47
Sub-Group III.—Septic Diseases		5	—	—	—	—	—	25
Sub-Group IV.	Syphilis, Primary	266	—	—	—	—	—	24'40
	" Secondary	145	—	—	—	3	—	9'22
	Gonorrhoea	654	—	—	—	—	—	33'37
Total		1,065	—	—	—	3	—	67'08
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		—	—	—	—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	35	—	—	—	—	—	84
GROUP "C."								
Debility, &c.		36	—	—	—	21	8	2'47
GROUP "D."								
Rheumatism		184	—	—	—	6	3	11'52
Tubercular Diseases		12	—	2	2	8	5	82
Other Diseases		5	2	—	2	—	1	28
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		1	—	—	—	—	1	02
2. Eye { Mental		3	—	—	—	3	2	55
3. Eye		59	—	—	—	—	—	1'91
3 & 4. Other Organs of Special Senses		42	—	—	—	—	—	1'88
5. Circulatory System		2	1	1	2	1	3	06
6. Respiratory		163	1	1	1	1	2	6'66
7. Digestive		335	—	1	1	3	2	9'02
8. Lymphatic and Glandular System		70	—	—	—	—	—	8'46
9. Urinary System		—	1	1	2	—	—	—
10. Generative		537	—	—	—	—	—	28'80
11. Organs of Locomotion		3	—	—	—	1	—	13
12. Connective Tissue		53	—	—	—	—	1	2'69
13. Skin		167	—	—	—	—	—	4'01
III.—POISONS		1	1	—	1	—	—	—
IV.—INJURIES.								
1. General		1	1	—	1	—	—	—
2. Local		403	3	—	3	1	1	16'29
3. In Action		—	—	—	—	—	—	—
No appreciable disease		8	—	—	—	—	—	26
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		3,634	36	5	41	116	30	211'38
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for 1886 to 1887 in

ABSTRACT No. III. TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at MALTA during the Year 1886, with the Ratios per

Average Strength, 4,736.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.	
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.		
I.—GENERAL DISEASES.									
GROUP "A."									
Sub-Group I.	{ Small-pox	-	-	-	-	-	-	-	
	{ Other Eruptive Fevers	-	-	-	-	-	-	-	
	{ Enteric Fever	34	8	-	8	3	-	12'34	
	{ Other Continued Fevers	730	2	-	2	7	-	55'03	
	{ Yellow Fever	-	-	-	-	-	-	-	
	{ Cholera	-	-	-	-	-	-	-	
	{ Dysentery	53	3	-	3	-	-	3'76	
	{ Other Diseases	4	1	-	1	-	-	'28	
Total		-	821	14	-	14	10	-	71'39
Sub-Group II.—Malarial Fevers		-	11	1	-	1	3	-	2'00
Sub-Group III.—Septic Diseases		-	1	-	-	-	-	-	'17
Sub-Group IV.	{ Syphilis, Primary	-	89	-	-	-	-	-	7'66
	{ " Secondary	-	69	-	-	-	1	-	4'59
	{ Gonorrhœa	-	260	-	-	-	-	-	16'96
Total		-	418	-	-	-	1	-	29'21
Sub-Group V.—Hydrophobia, &c.		-	-	-	-	-	-	-	-
GROUP "B."									
Sub-Group I.—Parasitic Diseases		-	6	-	-	-	-	-	'14
Sub-Group II.	{ Scurvy	-	-	-	-	-	-	-	-
	{ Alcoholism	-	20	-	-	-	1	-	'61
GROUP "C."									
Debility, &c.		-	83	-	-	-	6	3	7'86
GROUP "D."									
Rheumatism		-	161	-	-	-	3	4	13'00
Tubercular Diseases		-	12	1	5	6	11	7	2'35
Other Diseases		-	12	-	-	-	1	1	'99
II.—LOCAL DISEASES.									
Diseases of the—									
1. Nervous System	{ Nervous Diseases	-	25	1	-	1	3	8	1'43
	{ Mental	-	5	1	-	1	5	9	1'26
	2. Eye	-	88	-	-	-	1	1	4'08
	3 & 4. Other Organs of Special Senses	-	45	-	-	-	-	-	2'09
	5. Circulatory System	-	64	1	-	1	11	15	6'54
	6. Respiratory	-	140	1	2	3	5	4	13'26
	7. Digestive	-	463	2	-	2	6	1	16'52
	8. Lymphatic and Glandular System	-	29	-	-	-	1	-	2'92
	9. Urinary System	-	6	-	-	-	1	-	'60
	10. Generative	-	137	-	-	-	2	1	7'83
	11. Organs of Locomotion	-	21	-	1	1	-	3	1'08
	12. Connective Tissue	-	171	-	-	-	1	-	6'33
	13. Skin	-	231	-	-	-	3	-	11'20
III.—POISONS.									
IV.—INJURIES.									
1. General		-	1	2	-	2	-	-	'10
2. Local		-	459	2	-	2	2	2	17'52
3. In Action		-	-	-	-	-	-	-	-
No appreciable disease		-	5	-	-	-	-	-	'34
Cause unknown (refers to deaths only)		-	-	-	-	-	-	-	-
General Total		-	3,435	26	8	34	77	59	220'82
Average of 10 years, 1876-85		-	-	-	-	-	-	-	-

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK, among 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 19 .				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
7.2	1.69	.63	—	2.61	—	—	—	—	—
154.1	.42	1.48	—	11.62	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
11.2	.63	—	—	.79	—	—	—	—	—
.8	.21	—	—	.05	—	—	—	—	—
175.3	2.95	2.11	—	15.07	—	—	—	—	—
2.3	.21	.63	—	.42	—	—	—	—	—
.2	—	—	—	.03	—	—	—	—	—
18.8	—	—	—	1.02	—	—	—	—	—
14.5	—	.21	—	.97	—	—	—	—	—
55.9	—	—	—	3.68	—	—	—	—	—
88.2	—	.21	—	6.17	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1.3	—	—	—	.03	—	—	—	—	—
4.2	—	.21	—	.13	—	—	—	—	—
17.5	—	1.27	.63	1.66	—	—	—	—	—
34.0	—	.63	.84	2.74	—	—	—	—	—
2.5	1.27	2.32	1.48	.50	—	—	—	—	—
2.5	—	.21	.21	.21	—	—	—	—	—
5.3	.21	.63	1.69	.30	—	—	—	—	—
1.1	.21	1.06	1.90	.27	—	—	—	—	—
18.6	—	.21	.21	.86	—	—	—	—	—
9.5	—	—	—	.44	—	—	—	—	—
13.5	.21	2.32	3.17	1.38	—	—	—	—	—
29.6	.63	1.06	.84	2.80	—	—	—	—	—
97.8	.42	1.27	.21	3.49	—	—	—	—	—
6.1	—	.21	—	.62	—	—	—	—	—
1.3	—	.21	.21	.13	—	—	—	—	—
28.9	—	.42	.21	1.65	—	—	—	—	—
4.4	.21	—	.63	.23	—	—	—	—	—
36.1	—	.21	—	1.34	—	—	—	—	—
48.8	—	.63	—	2.36	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
.2	.42	—	—	.02	—	—	—	—	—
96.9	.42	.42	.42	3.70	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1.1	—	—	—	.07	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
725.2	7.17	16.25	12.45	46.62	—	—	—	—	—
857.9	10.25	28.73	15.22	50.91	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. IIIA.—TABLE showing the AVERAGE STRENGTH, ADMIS-
among the ROYAL MALTA FENCIBLE ARTILLERY stationed at MALTA
average Ratios for 10 Years.*

Average Strength, 359.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com-mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis-charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	—	—	—	—	—	—	—
	Enteric Fever	—	—	—	—	—	—	—
	Other Continued Fevers	37	—	—	—	—	—	1·01
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	—	—	—	—	—	—	—
Other Diseases		—	—	—	—	—	—	—
Total		37	—	—	—	—	—	1·01
Sub-Group II.—Malarial Fevers		1	—	—	—	—	—	·02
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—
Sub-Group IV.	Syphilis, Primary	6	—	—	—	—	—	·46
	„ Secondary	3	—	—	—	—	1	·41
	Gonorrhoea	6	—	—	—	—	—	·36
Total		15	—	—	—	—	1	1·23
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		—	—	—	—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	—	—	—	—	—	—	—
GROUP "C."								
Debility, &c.		2	—	—	—	—	1	·06
GROUP "D."								
Rheumatism		11	—	—	—	—	—	·34
Tubercular Diseases		1	—	—	—	—	1	·33
Other Diseases		4	—	—	—	—	—	·19
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		3	—	—	—	—	—	·06
2. Eye " Mental		5	—	—	—	—	—	·16
3 & 4. Other Organs of Special Senses		1	—	—	—	—	—	·16
5. Circulatory System		3	—	—	—	—	1	·16
6. Respiratory "		38	—	—	—	—	—	1·88
7. Digestive "		40	—	—	—	—	—	·81
8. Lymphatic and Glandular System		—	—	—	—	—	—	—
9. Urinary System		—	—	—	—	—	—	—
10. Generative "		2	—	—	—	—	—	·03
11. Organs of Locomotion		—	—	—	—	—	—	—
12. Connective Tissue		5	—	—	—	—	—	·16
13. Skin		31	—	—	—	—	—	·94
III.—POISONS.								
IV.—INJURIES.								
1. General		—	—	—	—	—	—	—
2. Local		54	—	—	—	—	1	1·51
3. In Action		—	—	—	—	—	—	—
No appreciable disease		1	—	—	—	—	—	·04
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		254	—	—	—	—	5	8·93
Average of 10 years 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887, in

SIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the Ratios per 1,000 of the Strength and the

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	Inva- lids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
103·1	—	—	—	2·80	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
103·1	—	—	—	2·80	—	—	—	—	—
2·8	—	—	—	—	—	—	—	—	—
—	—	—	—	·06	—	—	—	—	—
16·7	—	—	—	1·28	—	—	—	—	—
8·4	—	—	2·78	1·14	—	—	—	—	—
10·7	—	—	—	·87	—	—	—	—	—
41·8	—	—	2·78	3·39	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
5·6	—	—	2·78	·17	—	—	—	—	—
30·6	—	—	—	·94	—	—	—	—	—
2·8	—	—	2·78	·92	—	—	—	—	—
11·1	—	—	—	·53	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
8·4	—	—	—	·17	—	—	—	—	—
—	—	—	—	·45	—	—	—	—	—
13·9	—	—	—	—	—	—	—	—	—
2·8	—	—	—	·45	—	—	—	—	—
8·4	—	—	2·78	5·21	—	—	—	—	—
105·9	—	—	—	2·26	—	—	—	—	—
111·2	—	—	—	—	—	—	—	—	—
—	—	—	—	·08	—	—	—	—	—
5·6	—	—	—	·44	—	—	—	—	—
13·9	—	—	—	2·62	—	—	—	—	—
86·4	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
150·4	—	—	2·78	4·21	—	—	—	—	—
—	—	—	—	·11	—	—	—	—	—
2·8	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
707·5	—	—	13·82	24·84	—	—	—	—	—
605·3	5·83	—	16·32	25·36	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. IV.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at CYPRUS during the Year 1886, with the Ratios

Average Strength, 636.		Admissions into Hospital.	Deaths.		Invalids.		Average Number Constantly Sick.
Diseases.			In the Com-mand.	Of Invalids.	Total.	Number sent Home.	
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I.	Small-pox	—	—	—	—	—	—
	Other Eruptive Fevers	1	—	—	—	—	.13
	Enteric Fever	11	5	—	5	2	2.10
	Other Continued Fevers	85	—	—	—	—	2.47
	Yellow Fever	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—
	Dysentery	22	1	—	1	—	1.55
Other Diseases		—	—	—	—	—	—
Total		119	6	—	6	2	6.25
Sub-Group II.—Malarial Fevers		102	—	—	—	1	2.51
Sub-Group III.—Septic Diseases		3	—	—	—	—	.25
Sub-Group IV.	Syphilis, Primary	92	—	—	—	—	6.16
	Secondary	23	—	—	—	—	2.22
	Gonorrhoea	32	—	—	—	—	1.65
Total		147	—	—	—	—	10.08
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases		3	—	—	—	—	.08
Sub-Group II.	Scurvy	3	—	—	—	—	.21
	Alcoholism	4	—	—	—	—	.33
GROUP "C."							
Debility, &c.		23	—	—	—	2	1.89
GROUP "D."							
Rheumatism		18	—	—	—	—	.89
Tubercular Diseases		1	—	—	—	—	.17
Other Diseases		—	—	—	—	—	.02
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System { Nervous Diseases		3	—	—	—	—	.14
Mental " "		1	—	—	—	—	.14
2. Eye		9	—	—	—	—	.56
3 & 4. Other Organs of Special Senses		1	—	—	—	—	.01
5. Circulatory System		1	1	—	1	—	.02
6. Respiratory " "		11	—	—	—	—	.29
7. Digestive " "		86	—	—	—	1	2.65
8. Lymphatic and Glandular System		8	—	—	—	—	.33
9. Urinary System		—	—	—	—	—	—
10. Generative " "		12	—	—	—	—	.31
11. Organs of Locomotion		6	—	—	—	1	.62
12. Connective Tissue		21	—	—	—	—	.88
13. Skin		31	—	—	—	—	1.14
III.—POISONS.							
IV.—INJURIES.							
1. General		1	—	—	—	—	.03
2. Local		68	—	—	—	—	2.62
3. In Action		—	—	—	—	—	—
No appreciable disease		—	—	—	—	—	—
Cause unknown (refers to deaths only)		—	—	—	—	—	—
General Total		682	7	—	7	7	32.32
Average of 8 years, 1878-85		—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887, in

into HOSPITAL, DEATHS, NUMBER INVALIDED AND CONSTANTLY SICK among per 1,000 of the Strength and the average Ratios for 10 Years.*

Ratio per 1,000.					* Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	In- valids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
1'6	—	—	—	20	—	—	—	—	—
17'3	7'86	3'14	—	3'30	—	—	—	—	—
133'6	—	—	—	3'88	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
34'6	1'57	—	—	2'44	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
187'1	9'43	3'14	—	9'82	—	—	—	—	—
160'4	—	1'57	—	3'96	—	—	—	—	—
4'7	—	—	—	39	—	—	—	—	—
144'6	—	—	—	9'69	—	—	—	—	—
36'2	—	—	—	3'49	—	—	—	—	—
50'3	—	—	—	2'59	—	—	—	—	—
231'1	—	—	—	15'77	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4'7	—	—	—	05	—	—	—	—	—
4'7	—	—	—	33	—	—	—	—	—
6'3	—	—	—	52	—	—	—	—	—
36'2	—	3'14	—	2'97	—	—	—	—	—
28'3	—	—	—	1'40	—	—	—	—	—
1'6	—	—	—	27	—	—	—	—	—
—	—	—	—	03	—	—	—	—	—
4'7	—	—	—	22	—	—	—	—	—
1'6	—	—	—	22	—	—	—	—	—
14'1	—	—	—	88	—	—	—	—	—
1'6	—	—	—	02	—	—	—	—	—
1'6	1'57	—	—	03	—	—	—	—	—
17'3	—	—	—	45	—	—	—	—	—
135'2	—	1'57	—	4'17	—	—	—	—	—
12'6	—	—	—	52	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
18'9	—	—	—	49	—	—	—	—	—
9'4	—	1'57	—	97	—	—	—	—	—
33'0	—	—	—	1'38	—	—	—	—	—
46'7	—	—	—	1'79	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1'6	—	—	—	05	—	—	—	—	—
106'9	—	—	—	4'12	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1072'3	11'00	11'00	—	50'81	—	—	—	—	—
1599'7	18'14	45'14	15'46	75'03	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1883, &c., &c.

ABSTRACT No. V.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed in CANADA during the Year 1886, with the

Average Strength, 1,283.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	1	—	—	—	—	—	·10
	Enteric Fever	—	—	—	—	—	—	—
	Other Continued Fevers	10	—	—	—	—	—	·53
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	—	—	—	—	—	—	—
	Other Diseases	—	—	—	—	—	—	—
Total		11	—	—	—	—	—	·63
Sub-Group II.—Malarial Fevers		—	—	—	—	—	—	—
Sub-Group III.—Septic Diseases		6	—	—	—	—	—	·31
Sub-Group IV.	Syphilis, Primary	43	—	—	—	—	—	3·63
	Secondary	44	—	—	—	1	—	3·97
	Gonorrhoea	102	—	—	—	—	—	4·68
Total		189	—	—	—	1	—	12·28
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		—	—	—	—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	—	—	—	—	—	—	—
GROUP "C."								
Debility, &c.		4	—	—	—	5	1	·20
GROUP "D."								
Rheumatism		46	—	—	—	—	—	2·70
Tubercular Diseases		—	—	—	—	—	2	—
Other Diseases		1	—	—	—	—	—	·05
II.—LOCAL DISEASES.								
Diseases of the—								
1.	Nervous System { Nervous Diseases	13	—	—	—	2	2	·94
	{ Mental	1	—	—	—	1	2	·17
	2. Eye	17	—	—	—	—	2	·89
	3 & 4. Other Organs of Special Senses	12	—	—	—	—	—	·55
	5. Circulatory System	17	—	—	—	5	5	1·20
	6. Respiratory	47	2	—	2	4	4	4·98
	7. Digestive	112	—	—	—	—	—	2·68
	8. Lymphatic and Glandular System	25	—	—	—	—	—	1·27
	9. Urinary System	30	—	—	—	1	—	·43
	10. Generative	30	—	—	—	—	—	1·42
	11. Organs of Locomotion	13	—	—	—	1	—	·61
	12. Connective Tissue	28	—	—	—	—	—	1·04
	13. Skin	70	—	—	—	1	2	2·84
III.—POISONS.								
IV.—INJURIES.								
1. General		—	1	—	1	—	—	—
2. Local		103	—	—	—	2	—	3·50
3. In Action		—	—	—	—	—	—	—
No appreciable disease		1	—	—	—	—	—	·08
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		751	3	—	3	23	20	36·77
Average of 10 years 1876-85		—	—	—	—	—	—	—

The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

ABSTRACT No. VI.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at BERMUDA during the Year 1886, with the Ratios

Average Strength, 1,227.		Admissions into Hospital.	Deaths.			Invalids.		Average Number constantly Sick.
Diseases.			In the Command.	Of Invalids.	Total.	Number sent Home.	Number finally Discharged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
b-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	—	—	—	—	—	—	—
	Enteric Fever	28	4	—	4	—	—	2.37
	Other Continued Fevers	25	—	—	—	—	—	.97
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	6	1	—	1	—	—	.35
Other Diseases		—	—	—	—	—	—	—
Total		59	5	—	5	—	—	3.69
Sub-Group II.—Malarial Fevers		2	—	—	—	—	—	.02
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—
Sub-Group IV.	Syphilis, Primary	28	—	—	—	—	—	3.62
	" Secondary	28	—	—	—	1	1	2.96
	Gonorrhœa	47	—	—	—	—	—	3.25
Total		103	—	—	—	1	1	9.85
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		—	—	—	—	—	—	—
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	6	1	—	1	—	—	.08
GROUP "C."								
Debility, &c.		24	—	—	—	4	1	2.10
GROUP "D."								
Rheumatism		36	—	—	—	2	3	1.76
Tubercular Diseases		3	1	—	1	1	2	.53
Other Diseases		4	—	—	—	—	—	.18
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		5	1	—	1	—	—	.23
" Mental		2	—	—	—	2	—	.32
2. Eye		10	—	—	—	1	—	.83
3 & 4. Other Organs of Special Senses		6	—	—	—	—	1	.14
5. Circulatory System		14	1	—	1	2	1	.82
6. Respiratory		39	3	—	3	3	5	2.89
7. Digestive		174	—	—	—	2	1	5.99
8. Lymphatic and Glandular System		35	—	—	—	—	1	2.52
9. Urinary System		5	—	—	—	—	—	.19
10. Generative		31	—	—	—	—	1	1.39
11. Organs of Locomotion		10	—	—	—	2	3	.85
12. Connective Tissue		17	—	—	—	—	—	.50
13. Skin		54	—	—	—	—	—	3.15
III.—POISONS.								
IV.—INJURIES.								
1. General		—	1	—	1	—	—	—
2. Local		135	2	—	2	—	—	4.07
3. In Action		—	—	—	—	—	—	—
No appreciable disease		7	—	—	—	—	—	.21
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		781	15	—	15	20	20	42.30
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	Inva- lids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
22·8	3·26	—	—	1·93	—	—	—	—	—
20·4	—	—	—	·79	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4·9	·81	—	—	·29	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
48·1	4·07	—	—	3·01	—	—	—	—	—
1·6	—	—	—	·02	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
22·8	—	—	—	2·95	—	—	—	—	—
22·8	—	·81	·81	2·43	—	—	—	—	—
38·3	—	—	—	2·65	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
83·9	—	·81	·81	8·03	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4·9	·81	—	—	·06	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
19·5	—	3·26	·81	1·71	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
29·3	—	1·63	2·44	1·43	—	—	—	—	—
2·4	·81	·81	1·63	·42	—	—	—	—	—
3·3	—	—	—	·15	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4·1	·81	—	—	·19	—	—	—	—	—
1·6	—	1·63	—	·26	—	—	—	—	—
8·2	—	·81	—	·68	—	—	—	—	—
4·9	—	—	·81	·11	—	—	—	—	—
11·4	·81	1·63	·81	·67	—	—	—	—	—
31·8	2·44	2·44	4·07	2·36	—	—	—	—	—
141·8	—	1·63	·81	4·88	—	—	—	—	—
28·5	—	—	·81	2·05	—	—	—	—	—
4·1	—	—	—	·15	—	—	—	—	—
25·3	—	—	·81	1·13	—	—	—	—	—
8·2	—	1·63	2·44	·69	—	—	—	—	—
13·9	—	—	—	·41	—	—	—	—	—
44·0	—	—	—	2·57	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	·81	—	—	—	—	—	—	—	—
110·0	1·63	—	—	3·32	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
5·7	—	—	—	·17	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
636·5	12·22	16·29	16·29	34·47	—	—	—	—	—
627·8	7·57	17·60	10·02	34·03	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. VII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the WHITE TROOPS stationed in the WEST INDIES during the Year 1886, with

Average Strength, 1,020.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Command.	Of Invalids.	Total.	Number sent Home.	Number finally Discharged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	3	—	—	—	—	—	·09
	Enteric Fever	1	1	—	1	—	—	·07
	Other Continued Fevers	231	1	—	1	—	—	6·70
	Yellow Fever	2	2	—	2	—	—	·07
	Cholera	—	—	—	—	—	—	—
	Dysentery	16	2	—	2	—	—	·54
Other Diseases		—	—	—	—	—	—	—
Total		250	6	—	6	—	—	7·47
Sub-Group II.—Malarial Fevers		41	3	—	3	—	—	1·79
Sub-Group III.—Septic Diseases		1	—	—	—	—	—	—
Sub-Group IV.	Syphilis, Primary	51	—	—	—	—	—	3·79
	" Secondary	25	—	—	—	—	—	2·34
	Gonorrhœa	125	—	—	—	—	—	8·92
Total		201	—	—	—	—	—	15·06
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		1	—	—	—	—	—	·02
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	12	—	—	—	—	—	·32
GROUP "C."								
Debility, &c.		24	—	—	—	4	1	·97
GROUP "D."								
Rheumatism		26	—	—	—	—	—	·97
Tubercular Diseases		1	—	—	—	1	—	·23
Other Diseases		4	—	—	—	—	—	·24
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		14	1	—	1	2	2	1·16
" Mental		—	—	—	—	—	1	—
2. Eye		16	—	—	—	—	—	·71
3 & 4. Other Organs of Special Senses		26	—	—	—	—	1	·72
5. Circulatory System		13	—	—	—	3	3	1·21
6. Respiratory		43	2	—	2	—	—	2·79
7. Digestive		101	—	—	—	—	—	2·33
8. Lymphatic and Glandular System		64	—	—	—	—	1	6·41
9. Urinary System		2	1	—	1	—	—	·06
10. Generative		66	—	—	—	—	—	3·20
11. Organs of Locomotion		10	—	—	—	3	1	·85
12. Connective Tissue		23	—	—	—	—	1	1·10
13. Skin		89	—	—	—	—	—	3·20
III.—POISONS		1	—	—	—	—	—	·01
IV.—INJURIES.								
1. General		—	—	—	—	—	—	—
2. Local		153	2	—	2	1	—	5·18
3. In Action		—	—	—	—	—	—	—
No appreciable disease		4	—	—	—	—	—	·12
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		1,192	15	—	15	14	12	56·19
Average for 10 Years 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in that

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	In- valids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
2'9	—	—	—	'06	—	—	—	—	—
1'0	'08	—	—	'07	—	—	—	—	—
229'4	'08	—	—	6'57	—	—	—	—	—
2'0	1'06	—	—	'07	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
15'7	1'06	—	—	'53	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
251'0	5'88	—	—	7'32	—	—	—	—	—
40'3	2'94	—	—	1'75	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1'0	—	—	—	—	—	—	—	—	—
50'0	—	—	—	3'72	—	—	—	—	—
24'5	—	—	—	2'29	—	—	—	—	—
122'5	—	—	—	8'74	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
197'0	—	—	—	14'75	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1'0	—	—	—	'02	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
11'8	—	—	—	'31	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
23'5	—	3'93	'98	'95	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
25'5	—	—	—	'95	—	—	—	—	—
1'0	—	'98	—	'22	—	—	—	—	—
3'9	—	—	—	'23	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
13'7	'98	1'96	1'96	1'15	—	—	—	—	—
—	—	—	'98	—	—	—	—	—	—
15'7	—	—	—	'70	—	—	—	—	—
25'5	—	—	'98	'70	—	—	—	—	—
12'7	—	2'94	2'94	1'19	—	—	—	—	—
42'2	1'96	—	'93	2'74	—	—	—	—	—
99'0	—	—	—	2'23	—	—	—	—	—
62'7	—	—	'98	6'28	—	—	—	—	—
2'0	'98	—	—	'06	—	—	—	—	—
64'7	—	—	—	3'23	—	—	—	—	—
9'8	—	2'94	'98	'83	—	—	—	—	—
23'5	—	—	'98	1'08	—	—	—	—	—
87'2	—	—	—	3'14	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1'0	—	—	—	'01	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
150'0	1'96	'98	—	5'08	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3'9	—	—	—	'12	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1168'6	14'70	13'73	11'76	55'00	—	—	—	—	—
893'5	15'42	26'53	13'95	44'68	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years for 1883, &c., &c.

ABSTRACT No. VIII.—TABLE showing the AVERAGE STRENGTH, CONSTANTLY SICK among the BLACK TROOPS stationed in the WEST INDIES Ratios for 10 Years.*

Average Strength, 1,120.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	1	—	—	—	—	—	·07
	Other Eruptive Fevers	3	—	—	—	—	—	·08
	Enteric Fever	—	—	—	—	—	—	—
	Other Continued Fevers	193	—	—	—	—	—	6·02
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	35	12	—	2	—	1	1·73
	Other Diseases	49	—	—	—	—	—	·88
Total		281	2	—	2	—	1	8·78
Sub-Group II.—Malarial Fevers		164	8	—	8	—	—	4·26
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—
Sub-Group IV.	Syphilis, Primary	104	—	—	—	—	—	11·11
	" Secondary	25	—	—	—	—	—	1·55
	Gonorrhoea	148	—	—	—	—	—	6·40
Total		277	—	—	—	—	—	19·06
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		2	—	—	—	—	—	·02
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	1	—	—	—	—	—	·01
GROUP "C."								
Debility, &c.		7	—	—	—	—	2	·52
GROUP "D."								
Rheumatism		96	—	—	—	—	—	3·61
Tubercular Diseases		5	3	—	3	—	1	1·34
Other Diseases		4	1	—	1	—	2	·65
II.—LOCAL DISEASES.								
Diseases of the—								
1.	Nervous System { Nervous Diseases	24	2	—	2	—	2	1·61
	" { Mental " "	1	—	—	—	—	2	·35
2.	Eye	21	—	—	—	—	2	1·15
3 & 4.	Other Organs of Special Senses	4	1	—	1	—	—	·17
5.	Circulatory System	6	2	—	2	—	3	1·27
6.	Respiratory	83	2	—	2	—	1	4·47
7.	Digestive	113	—	—	—	—	—	2·41
8.	Lymphatic and Glandular System	29	—	—	—	—	—	1·83
9.	Urinary System	6	1	—	1	—	—	·43
10.	Generative " "	67	—	—	—	—	1	3·59
11.	Organs of Locomotion	3	—	—	—	—	1	·19
12.	Connective Tissue	53	—	—	—	—	—	2·69
13.	Skin	93	—	—	—	—	—	2·70
III.—POISONS		—	—	—	—	—	—	—
IV.—INJURIES.								
1.	General	1	—	—	—	—	—	·02
2.	Local	102	—	—	—	—	—	2·95
3.	In Action	—	—	—	—	—	—	—
No appreciable disease		5	—	—	—	—	—	·05
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		1448	22	—	22	—	18	64·13
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the 1886 to 1897, in

ADMISSIONS into HOSPITAL, **DEATHS**, **NUMBERS** INVALIDED and during the year 1886, with the Ratios per 1,000 of the Strength, and the Average

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
.9	—	—	—	.06	—	—	—	—	—
2.7	—	—	—	.07	—	—	—	—	—
172.3	—	—	—	5.38	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
31.2	1.79	—	.80	1.54	—	—	—	—	—
43.8	—	—	—	.79	—	—	—	—	—
250.9	1.79	—	.89	7.84	—	—	—	—	—
146.4	7.14	—	—	3.80	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
92.9	—	—	—	9.02	—	—	—	—	—
22.3	—	—	—	1.33	—	—	—	—	—
132.1	—	—	—	5.72	—	—	—	—	—
247.3	—	—	—	17.02	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1.8	—	—	—	.02	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
.9	—	—	—	.01	—	—	—	—	—
6.3	—	—	1.79	.47	—	—	—	—	—
85.7	—	—	—	3.22	—	—	—	—	—
4.5	2.07	—	.89	1.20	—	—	—	—	—
3.6	.89	—	1.79	.58	—	—	—	—	—
21.4	1.79	—	1.79	1.44	—	—	—	—	—
.9	—	—	1.79	.31	—	—	—	—	—
18.7	—	—	1.79	1.03	—	—	—	—	—
3.6	.89	—	—	.15	—	—	—	—	—
5.3	1.79	—	2.67	1.13	—	—	—	—	—
74.1	1.79	—	.89	3.99	—	—	—	—	—
100.9	—	—	—	2.15	—	—	—	—	—
25.9	—	—	—	1.63	—	—	—	—	—
5.3	.89	—	—	.38	—	—	—	—	—
59.8	—	—	.89	3.21	—	—	—	—	—
2.7	—	—	.89	.17	—	—	—	—	—
47.3	—	—	—	2.40	—	—	—	—	—
83.0	—	—	—	2.41	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
.9	—	—	—	.02	—	—	—	—	—
91.1	—	—	—	2.63	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4.5	—	—	—	.04	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1292.8	19.64	—	16.07	57.25	—	—	—	—	—
1074.1	15.38	—	26.79	58.38	—	—	—	—	—

year 1886 will be given in the Report for 1897 ; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. IX.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the BLACK TROOPS stationed at WEST AFRICA during the Year 1886,

Average Strength, 503.		Admissions into Hospital.	Deaths.			Invalids.			Average Number Constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent to West Indies.	Number finally Dis- charged the Service.		
I.—GENERAL DISEASES.									
GROUP "A."									
Sub-Group I.	Small-pox	—	—	—	—	—	—	—	
	Other Eruptive Fevers	—	—	—	—	—	—	—	
	Enteric Fever	—	—	—	—	—	—	—	
	Other Continued Fevers	35	—	—	—	—	—	36	
	Yellow Fever	—	—	—	—	—	—	—	
	Cholera	—	—	—	—	—	—	—	
	Dysentery	19	—	—	—	—	—	194	
	Other Diseases	31	—	—	—	—	—	73	
Total		85	—	—	—	—	—	303	
Sub-Group II.—Malarial Fevers		788	6	—	6	—	—	1501	
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—	
Sub-Group IV.	Syphilis, Primary	50	—	—	—	—	—	456	
	" Secondary	3	—	—	—	—	—	29	
	Gonorrhœa	122	—	—	—	—	—	638	
Total		175	—	—	—	—	—	1123	
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—	
GROUP "B."									
Sub-Group I.—Parasitic Diseases		1	—	—	—	—	—	—	
Sub-Group II.	Scurvy	—	—	—	—	—	—	—	
	Alcoholism	1	—	—	—	—	—	02	
GROUP "C."									
Debility, &c.		15	—	—	—	—	—	36	
GROUP "D."									
Rheumatism		26	—	—	—	—	—	142	
Tubercular Diseases		2	—	—	—	—	—	55	
Other Diseases		2	—	—	—	—	—	01	
II.—LOCAL DISEASES.									
Diseases of the—									
1. Nervous System { Nervous Diseases		6	—	—	—	—	—	47	
2. Eye		20	—	—	—	—	—	87	
3 & 4. Other Organs of Special Senses		4	—	—	—	—	—	07	
5. Circulatory System		21	—	—	—	—	—	111	
6. Respiratory		48	2	—	2	—	—	184	
7. Digestive		50	—	—	—	—	—	125	
8. Lymphatic and Glandular System		43	—	—	—	—	—	329	
9. Urinary System		1	1	—	1	—	—	02	
10. Generative		50	—	—	—	—	—	224	
11. Organs of Locomotion		5	—	—	—	—	—	40	
12. Connective Tissue		14	—	—	—	—	—	71	
13. Skin		73	—	—	—	—	—	291	
III.—POISONS.									
IV.—INJURIES.									
1. General		1	—	—	—	—	—	02	
2. Local		72	1	—	1	—	—	261	
3. In Action		—	—	—	—	—	—	—	
No appreciable disease		—	—	—	—	—	—	—	
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—	
General Total		1,503	10	—	10	—	—	4954	
Average of 10 years, 1876-85		—	—	—	—	—	—	—	

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent to West Indies.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	Inva- lids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
69·6	—	—	—	·71	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
37·8	—	—	—	3·86	—	—	—	—	—
61·6	—	—	—	1·45	—	—	—	—	—
169·0	—	—	—	6·02	—	—	—	—	—
1566·6	11·93	—	—	29·84	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
99·4	—	—	—	9·07	—	—	—	—	—
6·0	—	—	—	·58	—	—	—	—	—
242·5	—	—	—	12·68	—	—	—	—	—
347·9	—	—	—	22·33	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2·0	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2·0	—	—	—	·04	—	—	—	—	—
29·8	—	—	—	·71	—	—	—	—	—
51·7	—	—	—	2·82	—	—	—	—	—
4·0	—	—	—	1·09	—	—	—	—	—
4·0	—	—	—	·02	—	—	—	—	—
11·9	—	—	—	·83	—	—	—	—	—
39·8	—	—	—	1·73	—	—	—	—	—
8·0	—	—	—	·14	—	—	—	—	—
41·7	—	—	—	2·21	—	—	—	—	—
96·4	3·97	—	—	3·86	—	—	—	—	—
99·4	—	—	—	2·49	—	—	—	—	—
85·5	—	—	—	6·54	—	—	—	—	—
2·0	1·99	—	—	·04	—	—	—	—	—
99·4	—	—	—	4·45	—	—	—	—	—
9·9	—	—	—	·80	—	—	—	—	—
27·8	—	—	—	1·41	—	—	—	—	—
145·1	—	—	—	5·79	—	—	—	—	—
2·0	—	—	—	·04	—	—	—	—	—
143·1	1·99	—	—	5·19	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2968·0	19·88	—	—	98·49	—	—	—	—	—
1408·5	18·87	4·49	11·50	63·99	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. X.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed at the CAPE OF GOOD HOPE and ST. HELENA average Ratios for 10 Years.*

Average Strength, 3,971.		Admissions into Hospital.	Deaths.			Invalids.		Average Number constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	1	—	—	—	—	—	·12
	Enteric Fever	14	6	—	6	—	—	1·42
	Other Continued Fevers	163	—	—	—	—	—	5·85
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	17	—	—	—	2	—	1·25
Other Diseases		—	—	—	—	—	—	—
Total		197	6	—	6	2	—	8·64
Sub-Group II.—Malarial Fevers		34	—	—	—	—	—	1·11
Sub-Group III.—Septic Diseases		1	—	—	—	—	—	·08
Sub-Group IV.	Syphilis, Primary	478	—	—	—	—	—	37·17
	Secondary	195	1	—	1	4	3	14·64
	Gonorrhoea	422	—	—	—	—	—	30·02
Total		1,095	1	—	1	4	3	81·83
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		3	—	—	—	—	—	·02
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	20	—	—	—	—	—	·41
GROUP "C."								
Debility, &c.		96	—	—	—	16	5	7·31
GROUP "D."								
Rheumatism		108	—	—	—	6	3	8·43
Tubercular Diseases		8	—	—	—	—	1	1·33
Other Diseases		10	—	—	—	—	—	·33
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		22	1	—	1	7	4	2·25
" { Mental		5	—	—	—	4	5	1·05
2. Eye		81	—	—	—	6	8	6·96
3 & 4. Other Organs of Special Senses		12	1	—	1	—	1	·55
5. Circulatory System		36	1	—	1	15	10	5·28
6. Respiratory		59	2	—	2	1	1	3·85
7. Digestive		321	—	1	1	5	3	10·57
8. Lymphatic and Glandular System		148	—	—	—	—	—	13·30
9. Urinary System		19	—	—	—	—	—	·91
10. Generative		184	—	—	—	—	—	9·79
11. Organs of Locomotion		21	—	—	—	2	4	1·67
12. Connective Tissue		94	—	—	—	1	—	4·57
13. Skin		222	—	—	—	—	—	7·79
III.—POISONS.								
IV.—INJURIES.								
1. General		5	1	—	1	—	—	·17
2. Local		401	3	—	3	4	3	16·61
3. In Action		—	—	—	—	—	—	—
No appreciable disease		9	—	—	—	—	—	·14
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		3,211	16	1	17	73	51	194·06
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the Ratios per 1,000 of the Strength, and the

Ratio per 1,000.					* Average Ratio per 1,000 from 18 to 18 .				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
·2	—	—	—	·03	—	—	—	—	—
3·5	1·51	—	—	·36	—	—	—	—	—
41·6	—	—	—	1·47	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4·3	—	·50	—	·32	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
49·6	1·51	·50	—	2·18	—	—	—	—	—
8·6	—	—	—	·28	—	—	—	—	—
·2	—	—	—	·02	—	—	—	—	—
120·3	—	—	—	9·36	—	—	—	—	—
49·1	·25	1·01	·76	3·69	—	—	—	—	—
106·3	—	—	—	7·56	—	—	—	—	—
275·7	·25	1·01	·76	20·61	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
·7	—	—	—	·01	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
5·0	—	—	—	·10	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
24·2	—	4·03	1·26	1·84	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
27·2	—	1·51	·76	2·12	—	—	—	—	—
2·0	—	—	·25	·34	—	—	—	—	—
2·5	—	—	—	·08	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
5·5	·25	1·76	1·01	·57	—	—	—	—	—
1·3	—	1·01	1·26	·26	—	—	—	—	—
20·4	—	1·51	2·01	1·75	—	—	—	—	—
3·0	·25	—	·25	·14	—	—	—	—	—
9·1	·25	3·78	2·53	1·33	—	—	—	—	—
14·9	·50	·25	·25	·97	—	—	—	—	—
80·8	·25	1·26	·76	2·66	—	—	—	—	—
37·3	—	—	—	3·34	—	—	—	—	—
4·8	—	—	—	·23	—	—	—	—	—
46·3	—	—	—	2·47	—	—	—	—	—
5·3	—	·50	1·01	·42	—	—	—	—	—
23·7	—	·25	—	1·15	—	—	—	—	—
55·9	—	—	—	1·96	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1·3	·25	—	—	·04	—	—	—	—	—
101·0	·76	1·01	·76	4·18	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2·3	—	—	—	·04	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
808·6	4·28	18·38	12·84	40·09	—	—	—	—	—
828·9	38·96	58·80	22·06	50·87	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1886, &c., &c.

ABSTRACT No. XI.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed at MAURITIUS during the Year 1886, with

Average Strength, 414.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.	In the Com- mand.		Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Ser- vice.		
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	—	—	—	—	—	—	—
	Enteric Fever	2	2	—	2	—	—	08
	Other Continued Fevers	—	—	—	—	—	—	—
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	37	2	—	2	—	—	161
Other Diseases		—	—	—	—	—	—	—
Total		39	4	—	4	—	—	109
Sub-Group II.—Malarial Fevers		164	2	—	2	—	—	604
Sub-Group III.—Septic Diseases		1	—	—	—	—	—	01
Sub-Group IV.	Syphilis, Primary	16	—	—	—	—	—	178
	" Secondary	9	—	—	—	—	—	134
	Gonorrhœa	47	—	—	—	—	—	304
Total		72	—	—	—	—	—	613
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		—	—	—	—	—	—	—
Sub-Group II.	Scurvy	1	—	—	—	—	—	05
	Alcoholism	6	—	—	—	—	—	09
GROUP "C."								
Debility, &c.		23	—	—	—	4	1	115
GROUP "D."								
Rheumatism		10	—	—	—	—	—	68
Tubercular Diseases		2	—	—	—	2	—	12
Other Diseases		2	—	—	—	—	—	12
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		7	1	—	1	1	—	27
Mental		5	—	—	—	3	3	96
2. Eye		9	—	—	—	1	—	89
3 & 4. Other Organs of Special Senses		6	—	—	—	1	1	50
5. Circulatory System		14	—	—	—	3	1	98
6. Respiratory		11	—	—	—	—	—	99
7. Digestive		70	1	—	1	1	—	248
8. Lymphatic and Glandular System		24	—	—	—	—	—	218
9. Urinary System		1	—	—	—	—	—	08
10. Generative		17	—	—	—	—	—	100
11. Organs of Locomotion		1	—	—	—	—	—	03
12. Connective Tissue		12	—	—	—	—	—	37
13. Skin		38	—	—	—	—	—	198
III.—POISONS.								
IV.—INJURIES.								
1. General		—	1	—	1	—	—	—
2. Local		61	—	—	—	—	—	288
3. In Action		—	—	—	—	—	—	—
No appreciable disease		1	—	—	—	—	—	01
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		597	9	—	9	16	6	3138
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	In- valids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
4'8	4'83	—	—	19	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
80'4	4'83	—	—	3'89	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
94'2	9'66	—	—	4'08	—	—	—	—	—
396'1	4'83	—	—	14'59	—	—	—	—	—
2'4	—	—	—	02	—	—	—	—	—
38'7	—	—	—	4'23	—	—	—	—	—
21'7	—	—	—	3'24	—	—	—	—	—
113'6	—	—	—	7'34	—	—	—	—	—
173'9	—	—	—	14'81	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2'4	—	—	—	12	—	—	—	—	—
14'5	—	—	—	22	—	—	—	—	—
55'6	—	9'66	2'41	2'78	—	—	—	—	—
24'2	—	—	—	1'64	—	—	—	—	—
4'8	—	4'83	—	20	—	—	—	—	—
4'8	—	—	—	29	—	—	—	—	—
16'9	2'41	2'41	—	65	—	—	—	—	—
12'1	—	7'25	7'25	2'08	—	—	—	—	—
21'7	—	2'41	—	2'15	—	—	—	—	—
14'6	—	2'41	2'41	1'21	—	—	—	—	—
33'8	—	7'25	2'41	2'37	—	—	—	—	—
26'6	—	—	—	2'17	—	—	—	—	—
169'1	2'41	2'41	—	5'99	—	—	—	—	—
58'0	—	—	—	5'27	—	—	—	—	—
2'4	—	—	—	19	—	—	—	—	—
41'1	—	—	—	2'42	—	—	—	—	—
2'4	—	—	—	07	—	—	—	—	—
29'0	—	—	—	89	—	—	—	—	—
91'8	—	—	—	4'66	—	—	—	—	—
—	2'41	—	—	—	—	—	—	—	—
147'3	—	—	—	6'81	—	—	—	—	—
—	—	—	—	02	—	—	—	—	—
2'4	—	—	—	—	—	—	—	—	—
1442'0	21'73	38'64	14'49	75'79	—	—	—	—	—
2310'4	17'46	44'04	15'64	82'88	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. XII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the Troops stationed at CEYLON during the Year 1886, with the Ratios

Average Strength, 949.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com-mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis-charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	—	—	—	—	—	—	—
	Other Eruptive Fevers	—	—	—	—	—	—	—
	Enteric Fever	10	4	—	4	—	—	*81
	Other Continued Fevers	100	—	—	—	—	—	3*43
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	10	1	—	1	1	—	*97
Other Diseases		—	—	—	—	—	—	—
Total		120	5	—	5	1	—	5*21
Sub-Group II.—Malarial Fevers		30	—	—	—	—	—	*60
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—
Sub-Group IV.	Syphilis, Primary	104	—	—	—	—	—	7*45
	" Secondary	39	—	—	—	—	—	3*11
	Gonorrhoea	186	—	—	—	—	—	10*69
Total		329	—	—	—	—	—	21*25
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		4	—	—	—	—	—	*04
Sub-Group II.	Scurvy	—	—	—	—	—	—	—
	Alcoholism	9	1	—	1	—	—	*19
GROUP "C."								
Debility, &c.		6	—	—	—	1	1	*72
GROUP "D."								
Rheumatism		17	—	—	—	—	—	*93
Tubercular Diseases		1	—	—	—	1	2	*01
Other Diseases		10	—	—	—	—	—	*55
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		9	—	—	—	3	2	*56
" Mental		1	—	—	—	1	1	*18
2. Eye		10	—	—	—	—	1	*55
3 & 4. Other Organs of Special Senses		18	—	—	—	—	—	*71
5. Circulatory System		7	2	—	2	—	—	*22
6. Respiratory		14	—	—	—	5	2	2*03
7. Digestive		152	1	—	1	1	—	5*93
8. Lymphatic and Glandular System		45	—	—	—	—	—	5*02
9. Urinary System		2	—	—	—	—	—	*08
10. Generative		79	—	—	—	—	—	4*18
11. Organs of Locomotion		3	—	—	—	1	1	*12
12. Connective Tissue		24	—	—	—	—	—	*99
13. Skin		65	—	—	—	—	—	2*89
III.—POISONS.								
IV.—INJURIES.								
1. General		2	1	—	1	—	—	*04
2. Local		122	—	—	—	—	—	5*55
3. In Action		—	—	—	—	—	—	—
No appreciable disease		—	—	—	—	—	—	—
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		1,079	10	—	10	14	10	58*55
Average of 10 years 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in that

into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
10·5	4·22	—	—	·85	—	—	—	—	—
105·4	—	—	—	3·62	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
10·5	1·05	1·05	—	1·02	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
126·4	5·27	1·05	—	5·49	—	—	—	—	—
31·6	—	—	—	·63	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
109·6	—	—	—	7·85	—	—	—	—	—
41·1	—	—	—	3·28	—	—	—	—	—
196·0	—	—	—	11·26	—	—	—	—	—
346·7	—	—	—	22·39	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4·2	—	—	—	·04	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
9·5	1·05	—	—	·20	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
6·3	—	1·05	1·05	·76	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
17·9	—	—	—	·98	—	—	—	—	—
1·1	—	1·05	2·11	·01	—	—	—	—	—
10·5	—	—	—	·58	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
9·5	—	3·16	2·11	·59	—	—	—	—	—
1·1	—	1·05	1·05	·19	—	—	—	—	—
10·5	—	—	1·05	·58	—	—	—	—	—
19·0	—	—	—	·75	—	—	—	—	—
7·4	2·11	—	—	·23	—	—	—	—	—
14·8	—	5·27	2·11	2·14	—	—	—	—	—
160·2	1·05	1·05	—	6·25	—	—	—	—	—
47·3	—	—	—	5·29	—	—	—	—	—
2·1	—	—	—	·08	—	—	—	—	—
83·2	—	—	—	4·40	—	—	—	—	—
3·1	—	1·05	1·05	·13	—	—	—	—	—
26·3	—	—	—	1·04	—	—	—	—	—
68·5	—	—	—	3·04	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2·1	1·05	—	—	·04	—	—	—	—	—
128·6	—	—	—	5·85	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1136·9	10·53	14·75	10·53	61·68	—	—	—	—	—
1125·0	14·23	37·06	14·74	59·07	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years for 1883, &c., &c.

o 52781.

ABSTRACT No. XIII.—TABLE showing the AVERAGE STRENGTH, ADMIS-
among the TROOPS stationed in CHINA and the STRAITS SETTLEMENTS
Average Ratios for 10 years.*

Average Strength, 2,269.		Admissions into Hospital.	Deaths.			Invalids.		Average Number constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	{ Small-pox	—	—	—	—	—	—	—
	{ Other Eruptive Fevers	—	—	—	—	—	—	—
	{ Enteric Fever	4	2	—	2	—	—	·39
	{ Other Continued Fevers	271	1	—	1	—	—	7·88
	{ Yellow Fever	—	—	—	—	—	—	—
	{ Cholera	1	1	—	1	—	—	·01
	{ Dysentery	17	1	—	1	—	—	1·07
	{ Other Diseases	1	—	—	—	—	—	·04
	Total	294	5	—	5	—	—	9·39
Sub-Group II.—Malarial Fevers		903	3	—	3	—	—	23·21
Sub-Group III.—Septic Diseases		—	—	—	—	—	—	—
Sub-Group IV.	{ Syphilis, Primary	72	—	—	—	—	—	6·39
	{ " Secondary	87	—	—	—	2	1	4·98
	{ Gonorrhoea	197	—	—	—	—	—	13·90
	Total	356	—	—	—	2	1	25·25
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		10	—	—	—	—	—	·25
Sub-Group II.	{ Scurvy	—	—	—	—	—	—	—
	{ Alcoholism	20	3	—	3	—	—	·55
GROUP "C."								
Debility, &c.		40	—	—	—	4	3	2·90
GROUP "D."								
Rheumatism		24	—	—	—	1	—	1·00
Tubercular Diseases		2	—	—	—	1	1	·17
Other Diseases		16	—	—	—	—	—	1·72
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		17	1	1	2	1	3	·77
{ Mental		4	1	—	1	1	1	·90
2. Eye		29	—	—	—	1	—	1·16
3 & 4. Other Organs of Special Senses		16	—	—	—	—	—	·58
5. Circulatory System		16	2	—	2	3	3	1·46
6. Respiratory		68	3	—	3	1	2	2·97
7. Digestive		193	2	—	2	2	1	7·83
8. Lymphatic and Glandular System		38	—	—	—	—	—	2·05
9. Urinary System		8	1	—	1	—	1	1·18
10. Generative		65	—	—	—	—	—	3·86
11. Organs of Locomotion		31	—	—	—	4	2	2·07
12. Connective Tissue		166	—	—	—	—	—	4·77
13. Skin		207	—	—	—	—	—	9·44
III.—POISONS		3	—	—	—	—	—	·07
IV.—INJURIES.								
1. General		5	3	—	3	—	—	·16
2. Local		183	1	—	1	1	2	8·27
3. In Action		—	—	—	—	—	—	—
No appreciable disease		6	—	—	—	—	—	·24
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		2,665	25	1	26	22	20	112·12
Average of 10 years, 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

SIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1886, with the Ratios per 1,000 of the Strength, and the

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	Inva- lids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1'8	'88	—	—	'17	—	—	—	—	—
119'4	'44	—	—	3'47	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
'4	'44	—	—	'00	—	—	—	—	—
7'5	'44	—	—	'47	—	—	—	—	—
'4	—	—	—	'02	—	—	—	—	—
129'5	2'20	—	—	4'13	—	—	—	—	—
398'0	1'32	—	—	10'23	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
31'7	—	—	—	2'82	—	—	—	—	—
38'3	—	'88	'44	2'18	—	—	—	—	—
86'8	—	—	—	6'13	—	—	—	—	—
156'8	—	'88	'44	11'13	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
4'4	—	—	—	'11	—	—	—	—	—
8'8	1'32	—	—	'24	—	—	—	—	—
17'6	—	1'76	1'32	1'28	—	—	—	—	—
10'6	—	'44	—	'44	—	—	—	—	—
'9	—	'44	'44	'08	—	—	—	—	—
7'1	—	—	—	'76	—	—	—	—	—
7'5	'88	'44	1'32	'34	—	—	—	—	—
1'8	'44	'44	'44	'35	—	—	—	—	—
12'8	—	'44	—	'51	—	—	—	—	—
7'1	—	—	—	'26	—	—	—	—	—
7'1	'88	1'82	1'32	'64	—	—	—	—	—
30'0	1'32	'44	'88	1'31	—	—	—	—	—
85'1	'88	'88	'44	3'45	—	—	—	—	—
16'7	—	—	—	'90	—	—	—	—	—
3'5	'44	—	'44	'52	—	—	—	—	—
28'6	—	—	—	1'70	—	—	—	—	—
13'7	—	1'76	'88	'81	—	—	—	—	—
46'7	—	—	—	2'20	—	—	—	—	—
91'2	—	—	—	4'16	—	—	—	—	—
1'3	—	—	—	'08	—	—	—	—	—
2'2	1'32	—	—	'07	—	—	—	—	—
82'9	'44	'44	'88	3'65	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
2'6	—	—	—	'11	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1174'5	11'45	9'69	8'81	49'41	—	—	—	—	—
1047'7	10'30	41'78	17'84	49'58	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888 &c., &c.

ABSTRACT No. XIV.—TABLE showing the AVERAGE STRENGTH
CONSTANTLY SICK, among the Troops stationed in BENGAL

Average Strength, 39,558.		Admissions into Hospital.	Deaths.			Invalids.	
Diseases.			In the Com- mand.	Of In- valids.	Totals.	No. Sent Home.	No. finally dis- charged the Service.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I.	Small-pox	19	1	—	1	—	—
	Other Eruptive Fevers	309	—	—	—	—	—
	Enteric Fever	820	221	1	222	4	—
	Other Continued Fevers	3,661	3	—	3	—	—
	Yellow Fever	—	—	—	—	—	—
	Cholera	36	25	—	25	—	—
	Dysentery	1,056	35	—	35	35	1
Other Diseases		19	—	—	—	—	—
Total		5,920	285	1	286	39	1
Sub-Group II.—Malarial Fevers		15,095	37	—	37	32	—
Sub-Group III.—Septic Diseases		46	4	—	4	—	1
Sub-Group IV.	Syphilis, Primary	4,808	—	—	—	1	—
	Secondary	1,309	6	1	7	44	6
	Gonorrhoea	6,085	—	—	—	2	—
Total		12,202	6	1	7	47	6
Sub-Group V.—Hydrophobia, &c.		1	1	—	1	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases		181	—	—	—	—	—
Sub-Group II.	Scurvy	146	—	—	—	—	—
	Alcoholism	643	8	—	8	3	1
GROUP "C."							
Debility, &c.		884	1	—	1	58	47
GROUP "D."							
Rheumatism		1,370	4	—	4	33	10
Tubercular Diseases		158	32	11	43	61	46
Other Diseases		499	5	—	5	21	6
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System { Nervous Diseases		440	11	2	13	46	21
Mental		58	—	—	—	30	44
2. Eye		555	—	—	—	17	15
3 & 4. Other Organs of Special Senses		549	—	—	—	23	20
5. Circulatory System		518	17	2	19	115	62
6. Respiratory		1,386	34	3	37	36	21
7. Digestive		6,691	61	2	63	71	18
8. Lymphatic and Glandular System		853	—	—	—	9	5
9. Urinary System		94	5	—	5	11	3
10. Generative		2,632	—	—	—	13	9
11. Organs of Locomotion		259	2	1	3	32	17
12. Connective Tissue		867	—	—	—	2	3
13. Skin		3,017	—	—	—	4	2
III.—POISONS		10	2	—	2	—	—
IV.—INJURIES.							
1. General		161	50	—	50	2	—
2. Local		4,628	37	—	37	30	15
3. In Action		118	—	—	—	—	—
No appreciable disease		—	—	—	—	—	—
Cause unknown (refers to deaths only)		—	—	—	—	—	—
General Total		59,966	602	23	625	724	373
Average of 10 years, 1876-85		—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios 1886 to 1887, in that for

ADMISSIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED, and during the Year 1886, with the Ratios per 1,000 of the Strength.*

Average Number constantly Sick.	Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18 .				
	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged	Constantly Sick.	Admissions.	Deaths.	Invalids Sent Home.	Invalids finally Discharged	Constantly Sick.
1'46	'5	'03	—	—	'04	—	—	—	—	—
5'82	7'8	—	—	—	'15	—	—	—	—	—
105'06	20'7	5'61	'10	—	2'65	—	—	—	—	—
125'56	92'5	'06	—	—	3'17	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
'71	'9	'63	—	—	'02	—	—	—	—	—
64'07	26'7	'88	'88	'03	1'62	—	—	—	—	—
'69	'5	—	—	—	'02	—	—	—	—	—
303'37	149'6	7'23	'96	'03	7'67	—	—	—	—	—
415'37	381'6	'93	'81	—	10'50	—	—	—	—	—
3'01	1'2	'10	—	'03	'08	—	—	—	—	—
349'81	121'5	—	'03	—	8'84	—	—	—	—	—
110'74	33'1	'18	'11	'15	2'80	—	—	—	—	—
401'74	153'8	—	'05	—	10'16	—	—	—	—	—
862'29	308'4	'18	1'19	'15	21'80	—	—	—	—	—
'01	—	'03	—	—	—	—	—	—	—	—
5'06	4'6	—	—	—	'13	—	—	—	—	—
5'76	3'7	—	—	—	'15	—	—	—	—	—
17'31	16'3	'20	'08	'03	'44	—	—	—	—	—
51'54	22'3	'03	1'46	1'19	1'30	—	—	—	—	—
79'02	34'6	'10	'83	'25	2'00	—	—	—	—	—
26'84	4'0	1'09	1'54	1'16	'87	—	—	—	—	—
26'92	12'4	'13	'53	'15	'68	—	—	—	—	—
29'53	11'1	'33	1'16	'53	'75	—	—	—	—	—
20'89	1'5	—	'76	1'11	'53	—	—	—	—	—
29'99	14'0	—	'43	'38	'76	—	—	—	—	—
23'56	13'9	—	'56	'50	'60	—	—	—	—	—
44'92	13'1	'46	2'91	1'57	1'14	—	—	—	—	—
75'23	35'0	'93	'91	'53	1'90	—	—	—	—	—
227'03	169'1	1'59	1'79	'45	5'74	—	—	—	—	—
73'86	21'6	—	'23	'13	1'87	—	—	—	—	—
7'73	2'4	'13	'28	'06	'19	—	—	—	—	—
153'65	66'5	—	'33	'23	3'88	—	—	—	—	—
20'48	6'5	'06	'56	'42	'52	—	—	—	—	—
35'84	21'9	—	'05	'06	'91	—	—	—	—	—
115'60	76'3	—	'10	'05	2'92	—	—	—	—	—
'21	'3	'05	—	—	'01	—	—	—	—	—
7'31	4'1	1'26	'05	—	'18	—	—	—	—	—
178'63	117'0	'93	'76	'38	4'61	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3'22	2'9	—	—	—	'08	—	—	—	—	—
12'25	—	—	—	—	'06	—	—	—	—	—
2,846'45	1,515'9	15'80	18'30	9'43	71'96	—	—	—	—	—
—	1,584'7	18'00	34'17	17'34	66'68	—	—	—	—	—

for the year 1886 will be given in the Report for 1887; those for the two years 1888, &c., &c.

† Camps of Exercise.

ABSTRACT No. XV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS and DEATHS which took place at the CHIEF STATIONS in the BENGAL COMMAND during the year 1886.

Divisions.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in India.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1876 to 1885.	
					Admissions.	Deaths.	Admissions.	Deaths.
PRESIDENCY	Fort William	1,122	1,573	27	1402.0	24.06	1009.8	9.02
	Dum-Dum	773	1,304	4	1686.9	5.17	1309.4	11.77
	Barrackpore	252	674	2	2674.6	7.94	1887.5	12.47
	Darjeeling	249	307	9	1232.9	36.14	1079.2	15.38
ALLAHABAD	Allahabad	628	1,753	12	2791.4	19.11	1608.8	20.91
	Fort Allahabad	180	316	4	1755.6	22.22	1631.2	17.50
	Cawnpore	254	481	3	1833.7	11.81	1387.9	16.76
	Dinapore	904	1,529	24	1681.4	26.55	1526.3	14.74
	Benares	423	509	7	1203.3	16.55	1763.1	26.05
	Chunar	72	210	3	2916.7	41.67	2619.0	41.06
OUDH	Lucknow	1,872	2,391	27	1277.2	14.42	1423.0	15.94
	Military Prison	38	40	—	1052.6	—	1235.0	27.32
	Sitapur	483	559	7	1157.3	14.49	1380.3	21.27
	Fyzabad	908	1,257	11	1384.4	12.11	1553.9	21.32
ROHILCUND	Barceilly	757	1,117	9	1475.6	11.89	1312.6	12.23
	Moradabad	326	676	3	2073.6	9.20	1659.5	17.54
	Shahjehanpur	388	514	10	1324.7	25.77	1265.5	14.12
	Ranikhet	937	777	9	829.2	9.61	962.3	8.34
	Choubuttia	261	301	6	1153.3	22.99	1316.0	7.42
	Naini Tal	209	388	1	1856.5	4.78	1395.3	16.50
SAUGOR	Jubbulpore	760	1,053	11	1385.5	14.47	1119.8	9.75
	Saugor	375	664	8	1770.7	21.33	1470.1	14.06
	Nowgong	490	775	3	1581.6	6.12	1486.8	16.69
	Pachmarhi	95	303	3	3189.5	31.58	1848.7	9.89
GWALIOR	Morar	166	193	—	1162.7	—	1840.9	23.19
	Fortress Gwalior	67	53	1	865.7	14.93	1327.6	21.51
	Jhansi	509	897	22	1762.3	43.22	1851.4	7.74
	Sipri	84	192	2	2285.7	23.81	—	—
MEERUT	Meerut	1,904	3,620	25	1901.3	13.13	1638.6	15.14
	Fatehgarh	182	428	2	2351.6	10.99	1824.7	16.57
	Agra	954	1,324	7	1387.8	7.34	1620.5	13.94
	Muttra	387	834	9	2155.0	23.26	1675.6	20.78
	Delhi	490	1,317	9	2687.8	18.37	3204.5	19.40
	Roorkee	494	807	13	1633.6	26.32	1455.5	13.29
	Chakrata	867	991	8	1143.0	9.23	921.7	6.81
	Landour	153	290	—	1895.4	—	1643.6	15.99
	Umballa	1,978	2,415	30	1220.9	15.17	1518.9	11.39
SIRHIND	Jullundur	623	1,052	27	1675.2	42.99	1715.0	17.67
	Subathu	408	510	4	1250.0	9.80	1203.4	18.24
	Dagshai	810	1,089	17	1344.4	20.99	1039.2	9.53
	Jutozha	244	273	—	1118.9	—	1212.6	9.48
	Solon	226	172	—	761.1	—	1237.7	11.21
	Kasauli	324	917	2	2830.2	6.17	1913.8	19.96
LAHORE	Meean Meer	791	1,862	21	2354.0	26.55	2975.8	25.55
	Fort Lahore	118	222	6	1881.4	50.85	2582.9	42.25
	Ferozepore	814	1,708	4	2098.3	4.91	1851.3	12.35
	Mooltan	773	993	10	1284.6	12.94	1815.3	12.39
	Amritsar	343	761	7	2218.7	20.41	2778.4	12.99
	Bhagsu	48	45	—	937.5	—	1268.8	9.11
	Dalhousie	499	691	8	1384.8	16.03	1773.9	5.65

* 8 years (1878-85).

† 4 years (1882-85).

‡ 7 years (1879-85).

§ 8 years (1876-78 and 1881-85).

Divisions.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in India.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1876 to 1885.	
					Admissions.	Deaths.	Admissions.	Deaths.
RAWAL PINDI	Rawal Pindi -	2,325	3,230	23	1389.2	9.89	1606.0	14.04
	Fort Attock -	106	204	—	1924.5	—	2496.5	25.38
	Sialkot -	1,118	1,400	40	1252.2	35.78	1628.2	19.72
	Campbellpore -	243	295	2	1214.0	8.23	1579.4	22.03
	Khrya Gully -	83	161	2	1939.8	24.10	1465.0	30.00
	Barra Gully -	43	51	—	1146.0	—	*1493.7	1.69
	Kalubash -	42	49	—	1166.7	—	*1711.4	12.85
	Kuldunnah -	356	647	—	1817.4	—	*1327.5	13.97
	Camp Gharial -	222	260	1	1171.2	4.50	†1014.9	13.90
	" Topa -	359	453	1	1261.8	2.79	†1076.9	3.50
	" Thobba -	64	143	—	2102.9	—	§880.0	—
P'ESHAWAR	Murree -	276	375	9	1358.7	32.61	1861.3	24.46
	Peshawar -	1,659	2,732	32	1646.8	19.29	2370.8	21.49
	Sanitary Camp, Taroo -	8	14	—	1750.0	—	—	—
	Nowshera -	577	824	12	1428.1	20.80	1727.4	19.51
	Cherat -	482	633	8	1313.3	16.60	¶1442.3	16.34
QUETTA	Quetta -	1,358	3,091	12	2276.1	8.84	¶1026.7	28.50
	Camp Ziarat -	283	301	9	1063.6	31.80	—	—
	" Zerkhoon -	26	68	3	2615.4	115.38	—	—
	" Sakohi -	57	89	1	1561.4	17.54	—	—
	" Sinjaini -	23	29	—	1260.9	—	—	—
MARCHING	" Harnai -	107	110	—	1028.0	—	—	—
	Troops marching -	2,016	1,241	7	615.6	3.47	966.9	14.63
	Camps of Exercise	704	434	3	616.5	4.26	1031.7	2.76

* 9 years (1876-79 and 1881-85).
 § 2 years (1882 and 1884).

† 8 years (1876-78 and 1881-85).
 ¶ 9 years (1876-78 and 1880-85).

‡ 2 years (1884 and 1885).
 ¶ 2 years (1881 and 1882).

ABSTRACT No. XVI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL CLASSES of DISEASES in each of the MILITARY DIVISIONS in the BENGAL

Military Divisions.	Pre-sidency.		Allaha-bad.		Oudh.		Rohil-cund.		Saugor.		Gwalior.	
Average Strength.	2,306		2,461		3,301		2,873		1,720		826	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.												
GROUP "A."												
Sub-Group I. {	Small-pox -	—	—	—	—	—	—	—	3	—	1	—
	Other Eruptive Fevers -	29	—	4	—	158	2	1	—	—	—	—
	Enteric Fever -	14	7	29	8	147	24	114	15	21	28	15
	Other Continued Fevers -	544	—	481	1	339	—	187	—	68	33	—
	Yellow Fever -	—	—	—	—	—	—	—	—	—	—	—
	Cholera -	2	2	17	9	2	2	9	8	—	4	4
	Dysentery -	121	13	115	4	79	1	90	1	41	25	1
	Other diseases -	2	—	—	—	2	—	2	—	2	1	—
Total -	712	22	646	22	727	27	404	24	136	8	92	20
Sub-Group II.—Malarial Fevers -	611	2	981	3	365	1	803	—	904	2	362	—
Sub-Group III.—Septic Diseases -	1	—	3	1	—	—	4	—	2	—	1	—
Sub-Group IV. {	Syphilis, Primary -	213	—	239	—	322	—	268	—	202	—	34
	Secondary -	89	—	65	2	126	—	80	—	67	1	6
	Gonorrhoea -	540	—	594	—	587	—	577	—	250	—	124
Total -	842	—	898	2	1,035	—	925	—	519	1	164	—
Sub-Group V.—Hydrophobia, &c. -	—	—	—	—	—	—	—	—	—	—	—	—
GROUP "B."												
Sub-Group I.—Parasitic Diseases -	11	—	10	—	25	—	11	—	20	—	5	—
Sub-Group II. {	Scurvy -	1	—	2	—	4	—	2	—	2	—	1
	Alcoholism -	42	2	91	2	28	1	25	—	61	—	6
GROUP "C."												
Debility -	66	1	48	—	85	—	64	—	14	—	19	—
GROUP "D."												
Rheumatism -	48	1	66	—	134	—	90	—	33	—	23	—
Tubercular Diseases -	9	2	6	4	22	4	12	1	7	2	—	—
Other diseases -	35	1	53	—	44	—	24	—	22	—	5	—
II.—LOCAL DISEASES.												
Diseases of the—												
1. Nervous System {	33	1	54	—	50	1	16	1	13	—	5	—
2. Eye -	7	—	4	—	8	—	1	—	1	—	2	—
3 & 4. Other Organs of Special Senses -	47	—	40	—	46	—	23	—	21	—	16	—
5. Circulatory System -	66	—	72	—	50	—	34	—	20	—	32	—
6. Respiratory " -	13	1	24	—	74	—	39	—	17	2	23	—
7. Digestive " -	76	—	121	2	115	1	34	1	64	4	73	2
8. Lymphatic and Glandular System -	423	4	668	8	497	5	463	6	340	3	195	1
9. Urinary System -	66	—	61	—	47	—	26	—	55	—	21	—
10. Generative " -	6	—	10	—	13	—	5	—	1	—	1	—
11. Organs of Locomotion -	172	—	167	—	118	—	152	—	142	—	86	—
12. Connective Tissue -	15	—	29	—	14	—	15	—	10	—	5	—
13. Skin -	63	—	54	—	88	—	34	—	22	—	20	—
	247	—	312	—	275	—	171	—	99	—	53	—
III.—POISONS.												
IV.—INJURIES.												
1. General -	3	2	8	7	9	2	3	1	10	2	4	—
2. Local -	230	3	364	2	372	3	337	4	255	1	125	1
3. In Action -	—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease -	13	—	15	—	2	—	5	—	5	—	1	—
Cause unknown (refers to deaths only) -	—	—	—	—	—	—	—	—	—	—	—	—
General Total -	3,858	42	4,798	53	4,247	45	3,773	38	2,795	25	1,340	25

OFFICER, showing the PREVALENCE and MORTALITY of the DIFFERENT COMMAND with the ratios per 1,000 of Strength during the year 1886.

Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Quetta.		Troops on the March.		Marching.		Total.	
5,431		4,618		3,386		5,241		2,726		1,854.		2,016		704		39,558	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
—	—	—	—	7	—	3	—	5	1	—	—	—	—	—	—	19	1
5	—	106	—	2	—	2	—	—	—	—	—	—	—	—	—	309	—
61	22	106	32	62	19	154	39	60	27	8	5	11	—	5	—	820	221
250	—	420	1	267	1	165	—	757	—	93	—	46	—	11	—	3,661	3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
113	2	128	5	92	2	95	3	52	—	61	3	23	—	21	—	36	25
4	—	1	—	1	—	1	—	3	—	—	—	—	—	—	—	1,056	35
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	—
433	24	761	38	431	22	422	42	877	28	162	8	80	—	37	—	5,920	285
3,617	3	1,044	7	1,978	4	1,250	2	530	4	2,377	7	161	2	112	—	15,095	37
11	—	5	—	5	1	7	1	4	1	1	—	2	—	—	—	46	4
828	—	511	—	419	—	943	—	400	—	46	—	331	—	52	—	4,808	—
207	—	139	1	139	1	251	1	59	—	44	—	28	—	9	—	1,309	6
684	—	480	—	595	—	879	—	472	—	61	—	225	—	17	—	6,085	—
1,719	—	1,130	1	1,153	1	2,073	1	931	—	151	—	584	—	78	—	12,202	6
1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
15	—	17	—	29	—	25	—	20	—	1	—	—	—	1	—	190	—
66	—	28	—	14	—	1	—	2	—	23	—	—	—	—	—	146	—
41	—	95	1	80	—	99	—	20	—	53	—	2	—	—	1	643	8
168	—	108	—	115	—	72	—	79	—	43	—	9	—	4	—	884	1
187	1	277	1	168	1	157	—	76	—	57	—	37	—	17	—	1,370	4
19	5	15	6	23	3	22	4	16	1	2	—	4	—	1	—	158	32
38	—	70	1	80	2	41	1	26	—	45	—	8	—	—	—	489	5
59	1	40	2	57	1	65	3	18	1	14	—	10	—	7	—	441	11
7	—	7	—	3	—	10	—	5	—	2	—	1	—	—	—	58	—
72	—	105	—	51	—	54	—	54	—	9	—	11	—	6	—	555	—
74	—	54	—	46	—	60	—	29	—	8	—	4	—	—	—	549	—
77	5	57	2	32	2	110	3	28	—	12	2	7	—	4	—	517	17
178	7	138	6	134	4	162	—	121	5	81	2	31	—	8	—	1,386	34
897	11	822	11	669	1	834	4	459	3	322	3	52	1	50	—	6,691	61
110	—	111	—	90	—	153	—	85	—	16	—	22	—	10	—	853	—
6	—	7	1	12	2	19	2	6	—	4	—	4	—	—	—	94	5
441	—	414	—	258	—	415	—	205	—	40	—	23	—	9	—	2,632	—
39	—	34	1	23	1	34	—	19	—	10	—	4	—	8	—	259	2
150	—	132	—	79	—	104	—	61	—	30	—	25	—	5	—	867	—
487	—	364	—	320	—	370	—	214	—	49	—	28	—	19	—	3,008	—
—	—	2	—	4	1	1	—	—	—	1	—	1	—	—	—	10	2
8	7	3	—	27	8	39	8	43	7	3	2	—	3	1	—	161	50
687	8	578	2	390	2	696	7	266	2	172	—	130	—	56	—	4,628	37
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	10	—	11	—	23	—	9	—	3	—	1	—	1	—	113	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9,611	73	6,428	80	6,282	56	7,268	78	4,203	52	3,688	25	1,241	7	434	3	59,966	602

Ratio per 1,000

Military Divisions.		Pre-sidency.		Allaha-bad.		Oudh.		Rohil-cund.		Saugor.		Gwalior.	
Average Strength.		2,396		2,461		3,301		2,878		1,720		826	
Diseases.		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.													
GROUP "A."													
Sub-Group I.	Small-pox	—	—	—	—	—	—	—	1.7	—	—	1.2	—
	Other Eruptive Fevers	12.1	—	1.6	—	47.9	—	7	6	—	—	—	—
	Enteric Fever	5.9	2.92	11.8	3.25	44.5	7.27	39.6	5.21	12.2	4.65	33.9	18.16
	Other Continued Fevers	227.0	—	195.5	41.102	7	—	65.0	—	39.5	—	40.0	—
	Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—
	Cholera	8	.83	6.9	3.66	6	.61	3.1	2.78	—	—	4.8	4.64
	Dysentery	50.5	5.43	46.7	1.62	23.9	.30	31.3	.35	23.8	—	30.3	1.21
	Other Diseases	8	—	—	—	6	—	7	—	1.2	—	1.2	—
Total		297.1	9.18	262.5	8.94	220.2	8.18	140.4	8.34	79.0	4.65	111.4	24.21
Sub-Group II.—Malarial Fevers		255.0	.83	398.0	1.22	110.6	.30	279.0	—	525.6	1.16	438.3	—
Sub-Group III.—Septic Diseases		4	—	1.2	.41	—	—	1.4	—	1.2	—	1.2	—
Sub-Group IV.	Syphilis, Primary	88.9	—	97.1	—	97.5	—	93.1	—	117.4	—	41.1	—
	Secondary	37.1	—	26.4	.81	38.2	—	27.8	—	39.0	.58	7.3	—
	Gonorrhœa	225.4	—	241.4	—	177.8	—	200.5	—	145.3	—	150.1	—
Total		351.4	—	364.9	.81	313.5	—	321.4	—	301.7	.58	198.5	—
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—	—	—	—	—	—
GROUP "B."													
Sub-Group I.—Parasitic Diseases		4.6	—	4.1	—	7.6	—	3.8	—	11.6	—	6.1	—
Sub-Group II.	Scurvy	4	—	.8	—	1.2	—	.7	—	1.2	—	1.2	—
	Alcoholism	17.5	.83	37.0	.81	8.5	.30	8.7	—	35.5	—	7.3	1.21
GROUP "C."													
Debility, &c.		27.6	.42	19.5	—	25.8	—	22.3	—	8.1	—	23.0	—
GROUP "D."													
Rheumatism		20.0	.42	26.8	—	40.6	—	31.3	—	19.2	—	27.8	—
Tubercular Diseases		3.8	.83	2.4	1.62	6.7	1.21	4.2	.35	4.1	1.16	—	—
Other Diseases		14.6	.42	21.5	—	13.3	—	8.3	—	12.7	—	6.1	—
II.—LOCAL DISEASES.													
Diseases of the—													
1. Nervous System { Nervous Diseases		13.8	.42	21.9	—	15.1	.30	5.6	.35	7.6	—	6.1	—
Mental		2.9	—	1.6	—	2.4	—	.3	—	.6	—	2.4	—
2. Eye		19.6	—	16.3	—	13.9	—	8.0	—	12.2	—	19.4	—
3 & 4. Other Organs of Special Senses		27.6	—	29.3	—	15.1	—	11.8	—	11.6	—	38.7	—
5. Circulatory System		5.4	.42	9.8	—	22.4	—	13.6	—	9.9	1.16	27.8	—
6. Respiratory		31.7	—	49.1	.81	34.8	.30	29.2	.35	37.2	2.33	88.4	2.42
7. Digestive		176.5	1.67	271.4	3.25	150.6	1.52	160.9	2.08	197.7	1.75	236.1	1.21
8. Lymphatic and Glandular System		27.6	—	24.8	—	14.3	—	9.0	—	32.0	—	25.4	—
9. Urinary System		2.5	—	4.1	—	3.9	—	1.7	—	.6	—	1.2	—
10. Generative		71.8	—	63.8	—	35.8	—	52.8	—	82.6	—	104.1	—
11. Organs of Locomotion		6.3	—	11.8	—	4.3	—	5.2	—	5.8	—	6.1	—
12. Connective Tissue		26.3	—	21.9	—	26.7	—	11.8	—	12.7	—	24.2	—
13. Skin		103.1	—	126.8	—	83.3	—	59.4	—	57.6	—	64.2	—
III.—POISONS													
IV.—INJURIES.													
1. General		1.3	.83	3.3	2.85	2.7	.61	1.1	.35	5.8	1.16	4.8	—
2. Local		96.0	1.25	147.9	.81	112.7	.91	117.1	1.38	148.3	.58	151.3	1.21
3. In Action		—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease		5.4	—	6.1	—	.6	—	1.7	—	2.9	—	1.2	—
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—	—	—	—	—	—
General Total		1610.2	17.52	1949.6	21.53	1286.6	13.63	1311.0	13.20	1625.0	14.53	1622.3	30.28

of Mean Strength.

Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Quetta.		Troops on the March.		Camps of Exercise.		Total.	
5,431		4,618		3,386		5,241		2,726		1,854		2,016		704		39,553	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
—	—	—	—	2'1	—	'6	—	1'8	'37	—	—	—	—	—	—	'5	'03
11'2	4'03	23'0	6'33	18'3	5'61	20'3	7'44	22'0	9'90	4'5	2'70	5'5	—	7'1	—	7'8	—
46'1	—	90'9	'22	78'8	'30	31'5	—	277'7	—	50'2	—	22'8	—	15'6	—	20'7	5'59
—	—	—	—	—	—	'4	—	—	—	—	—	—	—	—	—	—	'08
20'8	'37	27'7	1'08	27'2	'59	18'1	'57	19'1	—	32'9	1'61	11'4	—	20'8	—	'9	'63
'7	'2	'2	'3	'3	'2	'2	'1	'1	—	—	—	—	—	—	—	'5	'88
79'7	4'42	164'8	8'23	127'3	6'50	80'5	8'01	321'7	10'27	87'4	4'31	39'7	—	52'5	—	149'7	7'21
666'0	55	226'1	1'52	584'2	1'18	238'5	'38	194'4	1'47	1282'1	3'78	79'8	'99	159'1	—	381'6	'98
2'0	—	1'1	—	1'5	'30	1'3	'19	1'5	'37	'5	—	1'0	—	—	—	1'2	'10
152'5	—	110'7	—	123'7	—	176'9	—	146'7	—	24'8	—	164'2	—	73'9	—	121'6	—
38'1	—	30'1	'22	41'1	'30	47'0	'19	21'6	—	23'7	—	13'9	—	12'8	—	33'1	'15
125'9	—	103'9	—	175'7	—	167'7	—	173'2	—	32'9	—	111'6	—	24'1	—	153'8	—
316'5	—	244'7	'22	340'5	'30	395'5	'19	341'5	—	81'4	—	289'7	—	110'8	—	308'5	'15
'2	'18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	'03
2'8	—	3'7	—	8'6	—	4'8	—	7'3	—	'5	—	—	—	1'4	—	4'8	—
12'2	—	6'1	—	4'1	—	'2	—	'7	—	12'4	—	—	—	—	—	3'7	—
7'5	—	20'6	'22	23'6	—	18'9	—	7'3	—	28'6	—	1'0	—	1'42	—	16'3	'20
29'1	—	23'4	—	34'0	—	13'7	—	29'0	—	23'2	—	4'4	—	5'7	—	22'3	'03
34'4	'18	60'0	'22	49'6	'30	30'0	—	27'9	—	30'8	—	18'3	—	24'2	—	34'6	'10
3'5	'92	3'2	1'29	6'8	'59	4'2	'77	5'9	'37	1'1	—	2'0	—	1'4	—	4'0	'81
7'0	—	15'2	'22	23'6	'59	7'8	'19	9'5	—	23'2	—	4'0	—	—	—	12'4	'13
10'9	'12	8'7	'43	16'8	'30	12'4	'57	6'6	'37	7'6	—	5'0	—	9'9	—	11'1	'28
1'3	—	1'5	—	'9	—	1'9	—	1'8	—	1'1	—	'5	—	—	—	1'5	—
13'3	—	22'7	—	15'1	—	10'3	—	19'8	—	4'9	—	5'5	—	8'5	—	14'0	—
13'6	—	11'7	—	13'6	—	11'5	—	10'6	—	4'3	—	2'0	—	—	—	13'9	—
14'2	'92	12'3	'43	9'4	'59	21'0	'57	10'3	—	6'5	1'08	3'4	—	5'7	—	13'1	'43
32'8	1'20	39'6	1'29	39'6	1'18	30'9	—	44'4	1'83	43'7	1'08	15'4	—	11'4	—	35'0	'86
165'1	2'03	178'0	2'38	197'6	'30	159'1	'77	168'4	1'10	173'6	1'61	25'8	'50	71'0	—	169'1	1'64
20'2	—	24'0	—	26'6	—	25'4	—	31'2	—	8'6	—	10'9	—	14'2	—	21'6	—
1'1	—	1'5	'22	3'5	'59	3'0	'38	2'2	—	2'2	—	2'0	—	—	—	2'4	'13
81'2	—	89'6	—	76'2	—	79'2	—	75'2	—	21'6	—	11'4	—	12'8	—	66'5	—
7'2	—	7'4	'22	6'8	'30	6'5	—	7'0	—	5'4	—	2'0	—	11'4	—	6'5	'05
27'6	—	28'5	—	23'3	—	19'9	—	22'4	—	16'1	—	12'4	—	7'1	—	21'9	—
89'7	—	73'8	—	94'6	—	70'6	—	78'5	—	26'4	—	13'9	—	27'0	—	76'0	—
—	—	'4	—	1'2	'30	'2	—	—	—	'54	'5	—	—	—	—	'2	'05
1'5	1'29	'7	—	8'0	2'36	7'4	1'52	15'8	2'57	1'6	1'08	—	1'48	1'4	1'42	4'1	1'26
126'5	1'48	125'1	'43	115'2	'59	127'1	1'34	97'6	'73	92'8	—	64'5	'50	79'6	1'42	117'0	'93
2'6	—	2'2	—	3'2	—	4'4	—	3'3	—	1'6	—	'5	—	1'4	—	2'0	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1799'7	13'44	1391'9	17'32	1855'3	16'57	1386'8	14'88	1541'8	19'03	1989'2	13'48	615'6	3'47	616'5	4'26	1515'9	15'22

ABSTRACT No. XVII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the year 1886.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency	Fort William -	3	2	3	—	4	1	1	3	11	6
	Dum Dum -	2	—	—	1	—	—	—	—	2	1
	Barrackpore -	—	—	—	—	1	—	—	—	1	—
Allahabad	Allahabad -	1	—	3	2	2	—	3	—	9	2
	Fort Allahabad	3	—	1	—	—	—	1	1	5	1
	Cawnpore -	—	—	—	—	—	—	1	1	1	1
	Dinapore -	1	1	3	1	1	1	3	—	8	3
	Benares -	2	—	—	—	2	—	—	—	4	—
Lucknow	Chunar -	—	—	—	—	1	1	1	—	2	1
	Lucknow -	20	3	57	6	13	2	14	4	104	15
	Lucknow Military Prison	—	—	—	—	1	—	—	—	1	—
	Sitapur -	13	1	3	2	2	1	1	—	19	4
	Fyzabad -	—	—	4	—	14	4	5	1	23	5
Rohilcund	Bareilly -	1	—	6	3	1	—	—	—	8	3
	Moradabad -	10	1	6	—	1	—	1	1	18	2
	Shahjehanpur	1	—	2	—	1	—	—	—	4	—
	Ranikhet -	1	—	40	—	19	5	—	—	60	5
	Choubuttia -	—	—	17	3	5	2	—	—	22	5
	Naini Tal -	—	—	2	—	—	—	—	—	2	—
Saugor	Jubbulpore -	3	—	1	—	4	1	4	2	12	3
	Saugor -	1	—	6	4	—	—	—	—	7	4
	Nowgong -	—	—	—	—	1	1	1	—	2	1
Gwalior	Jhansi -	2	—	4	1	14	8	6	5	26	14
	Sepree -	—	—	1	—	1	1	—	—	2	1

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Meerut	Meerut -	5	1	9	2	6	1	6	2	26	6
	Fatehgarh -	—	—	1	—	2	1	—	—	3	1
	Agra -	—	—	—	—	4	2	—	—	4	2
	Muttra -	2	—	3	2	6	2	3	1	14	5
	Delhi -	—	3	1	—	—	—	—	—	1	3
	Roorkee -	1	—	4	2	2	1	1	1	8	4
	Chakrata -	—	—	3	—	2	1	—	—	5	1
Sirhind -	Umballa -	6	2	20	5	9	4	3	—	38	11
	Jullundur -	2	3	1	2	4	2	3	—	10	7
	Subathu -	—	—	1	—	2	1	1	—	4	1
	Dagshai -	—	—	4	—	38	11	—	—	42	11
	Jutogh -	—	—	1	—	2	—	—	—	3	—
	Solon -	—	—	—	—	2	—	—	—	2	—
	Kasauli -	—	—	5	1	1	—	1	1	7	2
Lahore -	Meean Meer -	1	—	19	5	2	3	2	—	24	8
	Fort Lahore -	2	—	2	1	1	1	—	—	5	2
	Ferozepore -	—	—	2	—	—	—	1	—	3	—
	Mooltan -	1	—	4	—	3	1	4	1	12	2
	Amritser -	—	1	2	—	2	—	—	1	4	2
	Dalhousie -	—	—	8	2	6	2	—	1	14	5
Rawal Pindi	Rawal Pindi -	14	2	19	6	10	3	18	—	61	11
	Fort Attock -	—	—	—	—	1	—	—	—	1	—
	Sialkot -	1	—	21	8	26	7	19	9	67	24
	Campbellpore -	—	—	3	1	3	1	3	—	9	2
	Khyra Gully -	—	—	1	—	1	—	—	—	2	—
	Bara Gully -	—	—	1	—	—	—	—	—	1	—
	Kuldunnah -	—	—	2	—	—	—	—	—	2	—
	Camp Gharial -	—	—	1	—	1	1	—	—	2	1

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Rawal Pindi —cont.	Camp Thobba	—	—	3	—	—	—	—	—	3	—
	„ Topa -	—	—	2	1	1	—	—	—	3	1
	Murree -	—	—	1	—	2	—	—	—	3	—
Peshawar	Peshawar -	3	2	24	6	9	8	1	—	37	16
	Nowshera -	1	—	3	2	—	1	2	1	6	4
	Cherat -	—	—	9	4	8	3	—	—	17	7
Quetta	Quetta -	—	—	1	1	1	—	1	1	3	2
	Camp Ziarat -	—	—	—	—	4	2	—	—	4	2
	„ Sakobi	—	—	—	—	1	1	—	—	1	1
Marching	Troops on the March.	7	—	1	—	2	—	1	—	11	—
	Camps of Exercise.	5	—	—	—	—	—	—	—	5	—
	Tota -	115	22	341	74	252	88	112	37	820	221

ABSTRACT No. XVIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the year 1886.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency -	Fort William	—	—	—	—	2	2	—	—	2	2
Allahabad -	Allahabad	—	—	—	—	2	—	—	—	2	—
	Cawnpore	—	—	—	—	1	1	—	—	1	1
	Dinapore	—	—	—	—	2	2	10	5	12	7
	Chunar	1	—	—	—	1	1	—	—	2	1
Oudh -	Lucknow	—	—	—	—	1	1	1	1	2	2
Rohileund -	Bareilly	—	—	—	—	1	1	—	—	1	1
	Shahjehanpur	—	—	—	—	—	—	8	7	8	7
Gwalior -	Jhansi	—	—	—	—	4	4	—	—	4	4
Rawal Pindi -	Sialkot	—	—	—	—	1	—	—	—	1	—
	Murree	—	—	—	—	1	—	—	—	1	—
Total		1	—	—	—	16	12	19	13	36	25

ABSTRACT No. XIX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE of DYSENTERY, DIARRHŒA, and HEPATIC DISEASES (Congestion, Inflammation, and Abscess of Liver) in each of the DIVISIONS in the BENGAL COMMAND during the Year 1886.

Divisions.	Pre-sidency.	Allahabad.	Oudh.	Rohil-cund.	Saugor.	Gwalior.	Meerut.	Sirhind.	Lahore.	Rawal Pindi.	Peshawar.	Quetta.	Marching.	Camps of Exercise.	Total.															
Strength.	2,306	2,461	3,301	2,878	1,720	826	5,431	4,618	3,386	5,241	2,726	1,854	2,016	704	39,558															
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.															
Dysentery	121	13	115	4	79	1	90	1	41	—	25	1	113	2	128	5	92	2	95	3	52	—	61	3	23	—	21	—	1,056	35
Diarrhoea	166	—	252	—	117	—	131	—	100	—	87	—	377	—	243	—	179	—	290	—	132	—	112	—	20	—	13	—	2,318	—
Hepatic diseases (Congestion, Inflammation, and Abscess of Liver).	65	4	116	7	100	5	63	4	45	2	15	1	89	7	94	11	92	1	69	3	44	2	8	3	9	1	1	—	800	51
Total	342	17	483	11	296	6	284	5	196	2	127	2	579	9	455	16	383	3	463	6	228	2	181	6	52	1	35	—	4,074	86

Ratio per 1,000 of Mean Strength.

Dysentery	50.55.43	46.7	1.62	23.9	.30	31.3	.35	23.8	—	30.3	1.21	20.8	.37	27.7	1.08	27.2	.59	18.1	.57	19.1	—	32.9	1.61	11.4	—	29.8	—	26.7	.86	
Diarrhoea	65.1	—	102.4	2.85	35.4	—	45.5	—	58.1	—	106.3	—	69.4	—	52.6	—	52.8	—	57.1	—	48.4	—	60.4	—	9.9	—	18.5	—	50.1	—
Hepatic diseases (Congestion, Inflammation, and Abscess of Liver).	27.11.67	47.1	—	30.3	1.52	21.9	1.38	26.2	1.16	18.2	1.21	16.4	1.29	18.2	2.38	27.2	.80	13.2	.57	16.1	.73	4.3	1.61	4.5	.50	1.4	—	20.2	1.29	
Total	142.7.7.10	106.2	4.47	89.6	1.82	98.7	1.73	108.1	1.16	153.8	2.42	106.6	1.66	98.5	3.46	107.2	.89	88.4	1.14	83.6	.73	97.6	3.23	26.8	.60	40.7	—	103.0	2.17	

ABSTRACT No. XX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE and MORTALITY in the Cantonments of the BENGAL COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATIC DISEASES (Congestion, Inflammation, and Abscess of Liver), in each Quarter of the Year 1886.

	Strength.	Dysentery.			Diarrhœa.			Hepatitis (including Abscess of Liver).				Total.			
		Number.		Ratio per 1,000 of Strength.	Number.		Ratio per 1,000 of Strength.	Number.		Ratio per 1,000 of Strength.	Number.	Number.		Ratio per 1,000 of Strength.	Died.
		Admitted.	Died.		Admitted.	Died.		Admitted.	Died.		Admitted.	Admitted.	Died.		
1st Quarter	- 35,587	120	2	3·4	319	—	9·0	140	9	3·9	579	579	11	16·3	·31
2nd "	- 40,555	309	7	7·6	676	—	16·7	175	10	4·3	1,160	1,160	17	28·6	·42
3rd "	- 40,404	353	19	8·7	792	—	19·6	282	12	7·0	1,427	1,427	81	35·3	·77
4th "	- 38,274	274	7	7·2	477	—	12·5	221	20	5·7	972	972	27	25·4	·70
Total	- 38,705	1,056	35	27·3	2,264	—	58·5	818	51	21·1	4,138	4,138	86	106·9	2·22

ABSTRACT No. XXI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the COMPARATIVE MORTALITY and INVALIDING in the THREE GRADES of COMMISSIONED OFFICERS, NON-COMMISSIONED OFFICERS, and PRIVATES during the Year 1886, and for the Ten previous Years in the BENGAL COMMAND :—*

Years.	Average Strength.			Number of Deaths.			Invalided.			Ratio per 1,000.					
	Average Strength.			Number of Deaths.			Invalided.			Deaths.			Invalids.		
										Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
1876	-	1,735	3,820	33,417	39	95	503	96	178	1,257	22.48	24.87	55.33	46.60	37.62
1877	-	2,066	3,787	32,761	29	57	357	83	136	1,162	14.04	15.05	40.17	35.91	35.47
1878	-	2,018	3,782	32,374	28	86	694	79	141	1,300	13.88	22.74	39.15	37.28	40.16
1879	-	2,010	4,266	34,615	74	183	1,444	124	204	1,437	36.82	42.90	61.69	47.82	41.51
1880	-	1,699	5,369	42,797	31	149	1,085	95	220	1,819	18.25	21.75	55.92	40.98	42.50
1881	-	1,116	4,524	33,373	17	95	561	76	204	1,571	15.23	21.00	68.10	45.09	47.07
1882	-	1,101	4,183	31,318	12	65	406	51	164	1,071	10.90	15.54	46.32	39.21	34.20
1883	-	1,106	4,242	30,001	26	51	333	46	109	941	23.51	13.02	41.59	25.70	31.87
1884	-	1,116	3,986	29,754	29	52	339	55	129	859	25.99	13.05	49.28	32.36	28.87
1885	-	1,153	4,169	31,737	13	77	454	58	76	626	11.27	18.47	50.80	18.23	19.72
Average for 10 years	-	1,512	4,213	33,215	29.80	91.00	617.60	76.80	156.10	1,204.30	19.71	21.60	50.46	37.05	36.26
1886	-	1,142	4,489	36,489	24	71	756	62	63	666	21.02	15.82	54.29	14.03	18.25
1886	{ Killed in action and died from wounds received in battle				-	-	-	-	-	-	-	-	-	-	-
1886	{ Number of deaths, excluding those killed in action and died from wounds received in battle				24	71	756	-	-	21.02	15.82	20.72	-	-	-

* The figures in this Return, obtained from the Adjutant-General, do not agree with those in the other Returns compiled from the Station Hospital Returns.

ABSTRACT XXII.

ABSTRACT No. XXII.—TABLE showing the AVERAGE STRENGTH, ADMIS-
SICK among the TROOPS stationed in MADRAS during the

Average Strength, 11,199.		Admissions into Hospitals.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	1	—	—	—	—	—	85
	Other Eruptive Fevers	55	—	—	—	—	—	187
	Enteric Fever	139	44	—	44	1	—	1936
	Other Continued Fevers	1,257	1	—	1	—	—	6243
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	1	1	—	1	—	—	01
	Dysentery	770	30	—	30	22	8	6056
Other Diseases		16	—	—	—	—	—	51
Total		2,239	76	—	76	23	8	14479
Sub-Group II.—Malarial Fevers		1,573	8	—	8	3	—	6676
Sub-Group III.—Septic Diseases		12	1	—	1	—	—	64
Sub-Group IV.	Syphilis, Primary	1,079	—	—	—	—	—	8911
	" Secondary	378	—	—	—	7	1	3284
	Gonorrhoea	1,710	—	—	—	—	—	11793
Total		3,167	—	—	—	7	1	2398
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		33	—	—	—	—	—	98
Sub-Group II.	Scurvy	1	—	—	—	—	—	04
	Alcoholism	139	—	—	—	—	—	500
GROUP "C."								
Debility, &c.		320	1	—	1	36	23	2953
GROUP "D."								
Rheumatism		354	1	—	1	8	3	2281
Tubercular Diseases		54	6	1	7	20	18	1019
Other Diseases		110	2	—	2	1	1	739
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		128	7	—	7	15	20	721
{ Mental		23	1	—	1	17	25	654
2. Eye		169	—	—	—	3	11	918
3 & 4. Other Organs of Special Senses		148	—	—	—	9	5	771
5. Circulatory System		122	8	—	8	35	17	1268
6. Respiratory		356	8	1	9	9	4	2066
7. Digestive		2,101	32	2	34	51	8	9643
8. Lymphatic and Glandular System		505	—	—	—	5	2	5464
9. Urinary System		39	—	—	—	3	2	336
10. Generative		866	—	—	—	1	—	4992
11. Organs of Locomotion		61	—	—	—	10	9	557
12. Connective Tissue		227	—	—	—	—	—	962
13. Skin		1,002	—	—	—	4	—	3828
III.—POISONS		8	—	—	—	—	—	16
IV.—INJURIES.								
1. General		16	17	—	17	—	—	93
2. Local		1,490	14	—	14	7	10	6127
3. In Action		—	—	—	—	—	2	93
No appreciable disease		31	—	—	—	—	—	114
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		15,296	182	4	186	267	169	9363
Average of 10 years 1876-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the year 1885

ABSTRACT No. XXIII. — TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the AVERAGE STRENGTH, AVERAGE CONSTANTLY SICK, ADMISSIONS, DEATHS, and INVALIDS at the different STATIONS and CIRCLES in the MADRAS COMMAND, for the Year 1886.

Divisions.	Stations.	Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalids.	Ratio per 1,000 of Strength.					
							Average constantly Sick.	Admitted.	Died (in and out).	Invalids.	Average of previous Period of 10 Years.	
											Admitted.	Died.
Eastern District -	Madras and Pallaveram.	666	60	1,017	22	13	90'09	1527'03	33'03	19'52	1209'22	12'26
	St. Thomas' Mount	313	31	747	3	16	99'04	2386'58	9'58	51'12	1233'14	13'78
	Total	979	91	1,764	25	29	92'95	1801'84	25'51	29'62	—	—
Belgaum and Western District.	Belgaum -	802	66	900	5	21	82'29	1122'19	6'23	26'18	—	—
	Cannanore -	693	57	909	5	46	82'25	1311'60	7'21	66'38	1022'50	8'97
	Calicut -	111	11	167	1	—	99'10	1504'50	9'01	—	939'82	12'04
	Mallaporam -	102	11	218	—	—	107'84	2137'25	—	—	868'34	12'54
	Total	1,708	145	2,194	11	67	84'69	1284'54	6'44	39'23	—	—
Bangalore Division.	Bangalore -	1,597	90	1,499	12	22	56'35	938'63	7'51	13'77	1145'48	9'10
	Bellary -	821	69	1,070	3	19	84'04	1303'29	3'65	23'14	1484'49	9'1
	Ramandroog -	27	—	10	—	—	—	370'37	—	—	—	—
	Total	2,445	159	2,579	15	41	65'03	1054'81	6'13	16'77	—	—
Hyderabad Sub-diary Force.	Secunderabad	2,695	176	3,157	43	30	65'31	1171'43	15'95	11'13	1163'17	12'10
Nagpore Force -	Kamptec -	838	52	1,002	3	17	62'05	1195'70	3'58	20'29	1380'09	15'65
	Seetabuldee -	49	3	71	—	—	61'22	1448'98	—	—	1679'92	9'94
	Total	887	55	1,073	3	17	62'01	1209'69	3'58	19'16	—	—

ABSTRACT No. XXIII.—*continued.*

Divisions.	Stations.		Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Ratio per 1,000 of Strength.					
								Average constantly Sick.	Admitted.	Died (in and out).	Invalided.	Average of previous Period of 10 Years.	
												Admitted.	Died.
British Division.	Burma	Rangoon -	735	76	1,353	30	15	100·66	1702·05	39·74	10·87	1378·77	13·83
		Thayetmyo -	401	64	1,167	22	9	150·60	2910·22	54·86	22·44	1090·85	14·60
		Toungoo -	420	30	566	6	6	92·86	1347·62	14·28	14·28	1096·98	13·36
		Port Blair -	133	4	125	1	—	30·07	939·85	7·52	—	925·07	7·42
		Lhoyagheen -	11	1	34	—	—	90·91	3090·91	—	—	—	—
		Total -	1,720	184	3,245	59	30	106·98	1886·63	34·30	17·44	—	—
Depôts		Poonamallee -	164	42	506	8	32	256·10	3085·36	48·78	195·12	1954·97	43·05
		Wellington -	413	45	706	7	21	108·96	1709·44	16·95	50·85	1198·53	14·14
		Total -	577	87	1,212	15	53	150·78	2100·52	25·99	91·85	—	—
Marching		On the March -	188	6	72	11	—	31·91	382·98	58·51	—	585·00	40·16

ABSTRACT No. XXIV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL in each of the MILITARY DIVISIONS in the MADRAS

Military Divisions.	Eastern District.	Belgaum and Western District.	Bangalore Division and Ceded Districts.	Hyderabad Subsidiary Force.	Nagpore Force.	British Burma Division.	Depôts.	On the March.	Total.
Average Strength - - -	979	1,708	2,445	2,695	887	1,720	577	188	11,199
Diseases.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.	Admitted. Died.
I.—GENERAL DISEASES.									
GROUP "A."									
Sub-Group I.	Small-pox - - - - -	—	—	—	—	—	1	—	1
	Other Eruptive Fevers - - -	2	3	47	3	5	—	—	55
	Enteric Fever - - - - -	—	7	31	76	1	5	11	136
	Other Continued Fevers - - -	287	129	189	491	5	117	37	1,257
	Yellow Fever - - - - -	—	—	—	—	—	—	—	—
	Cholera - - - - -	—	—	—	—	—	—	—	—
Sub-Group II.	Dysentery - - - - -	36	7	131	4	60	149	3	13
	Other Diseases - - - - -	1	3	—	2	7	200	11	172
Total - - - - -									
Sub-Group III.—Malarial Fevers -									
Sub-Group IV.—Septic Diseases -									
Sub-Group V.	Syphilis, Primary - - - - -	101	216	427	75	9	162	84	5
	" " Secondary - - - - -	35	77	91	48	6	65	56	—
	Gonorrhœa - - - - -	190	322	374	424	90	250	57	3
Total - - - - -									
Sub-Group VI.—Hydrophobia, &c.									
GROUP "B."									
Sub-Group I.—Parasitic Diseases									
Sub-Group II.—Scurvy - - - - -									
Sub-Group III.—Alcoholism - - -									
GROUP "C."									
Debility, &c. - - - - -									
GROUP "D."									
Rheumatism - - - - -									
Tubercular Diseases - - - - -									
Other Diseases - - - - -									
II.—LOCAL DISEASES.									
Diseases of the—									
1. Nervous { Nervous Diseases -									
System { Mental - - - - -									
2. Eye - - - - -									
3 & 4. Other Organs of Special Senses.									
5. Circulatory System - - - - -									
6. Respiratory " - - - - -									
7. Digestive " - - - - -									
8. Lymphatic and Glandular System.									
9. Urinary System - - - - -									
10. Generative " - - - - -									
11. Organs of Locomotion - - -									
12. Connective Tissues - - - - -									
13. Skin - - - - -									
III.—POISONS									
IV.—INJURIES.									
1. General - - - - -									
2. Local - - - - -									
3. In Action - - - - -									
No appreciable disease - - -									
Cause unknown (refers to deaths only).									
General Total - - - - -									

ABSTRACT No. XXV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the Year 1886.

Divisions.	Stations.	1s Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Belgaum and Western District -	Belgaum -	1	—	—	—	2	1	1	—	4	1
	Cannanore -	2	—	—	—	1	—	—	—	3	—
Bangalore Division and Ceded Districts -	Bangalore -	4	—	11	5	12	3	3	—	30	8
	Bellary -	—	—	—	—	—	1	1	1	1	1
	Wellington -	—	—	4	1	6	1	1	—	11	2
Hyderabad Subsidiary Force.	Secunderabad	9	5	12	5	50	13	5	2	76	25
Nagpore Force -	Kamptee -	—	—	—	—	6	1	—	—	6	1
British Burma Division -	Rangoon -	—	—	1	1	2	1	—	1	3	3
	Thayetnyo -	—	—	1	1	1	1	—	—	2	2
Marching -	On the March	1	—	—	—	—	—	2	1	3	1
	Total -	17	5	29	13	80	21	13	5	139	44

ABSTRACT No. XXVI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the Year 1886.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
British Burma Division.	Rangoon -	—	—	—	—	—	1	—	—	—	1
Marching -	On the March	—	—	—	—	1	—	—	—	1	—
	Total -	—	—	—	—	1	1	—	—	1	1

ABSTRACT No. XXVII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the prevalence of DYSENTERY, DIARRHŒA, and HEPATITIS in each of the DIVISIONS in the MADRAS COMMAND for 1886.

Divisions.	Eastern District.	Belgaum and Western District.		Bangalore Division and Ceded Districts.		Hyderabad Subsidiary Force.		Nagpore Force.		British Burma Division.		On the March.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Strength.	1,143	1,708		2,858		2,695		887		1,720		188		11,199	
Diseases.															
Dysentery -	-	173	7	131	4	95	1	149	3	200	11	9	4	770	30
Diarrhœa -	-	88	-	98	-	98	-	13	-	173	4	6	-	650	4
Hepatitis and Abscess of Liver -	-	57	7	58	5	60	3	8	1	75	8	1	1	320	27
Total -	-	318	14	271	9	253	4	34	1	448	23	16	5	1,740	61
Ratio per 1,000 of Strength.															
Dysentery -	-	151·36	6·12	76·70	2·34	33·24	0·35	55·29	1·11	116·28	6·40	47·87	21·28	68·76	2·68
Diarrhœa -	-	76·99	-	48·01	-	34·29	-	70·50	-	100·58	2·32	31·91	-	58·04	0·36
Hepatitis and Abscess of Liver -	-	49·87	6·12	33·96	2·92	20·99	1·05	22·63	0·74	43·60	4·65	5·32	5·32	28·57	2·41
Total -	-	278·21	12·25	158·67	5·27	88·52	1·40	148·42	1·85	260·46	13·37	85·11	26·60	155·37	5·45

ABSTRACT No. XXVIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE and MORTALITY in the MADRAS COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATITIS, in each of the Quarter of the Year 1886.

	Strength.	Dysentery.				Diarrhœa.				Hepatitis (including Abscess of Liver).				Total.			
		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter	-	142	1	13.10	0.09	134	—	12.36	—	61	4	5.63	0.37	337	5	31.08	0.46
2nd "	-	156	7	13.12	0.59	216	1	18.17	0.08	81	6	6.81	0.50	423	14	38.10	1.18
3rd "	-	303	16	26.00	1.37	169	2	14.49	0.17	100	9	8.58	0.77	573	27	49.07	2.32
4th "	-	169	6	16.23	0.58	131	1	12.58	0.10	78	8	7.49	0.77	378	15	36.80	1.44
Total for the Year	11,199	770	30	68.76	2.68	650	4	58.04	0.36	320	27	28.57	2.41	1,740	61	155.87	5.45

ABSTRACT XXIX.

ABSTRACT No. XXIX.—The following TABLE, taken from the REPORT of the
and INVALIDING for the YEAR under

Years.	Average Strength.			Number of Deaths.		
	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
1876 - - -	405	1,670	9,671	7	31	143
1877 - - -	454	1,700	9,641	6	46	142
1878 - - -	442	1,665	9,491	9	55	178
1879 - - -	433	1,660	9,744	8	33	140
1880 - - -	473	1,611	9,503	5	8	92
1881 - - -	425	1,555	9,108	4	21	93
1882 - - -	525	1,205	10,001	3	19	95
1883 - - -	388	1,213	9,426	3	28	80
1884 - - -	375	1,268	9,682	4	20	73
1885 - - -	389	1,245	9,656	3	23	74
Average for 10 years -	431	1,479	9,592	5	28	111
1886 - - -	467	1,475	12,366	8	39	143

PRINCIPAL MEDICAL OFFICER of MADRAS, shows the comparative MORTALITY REPORT and for the TEN previous YEARS.

Invalided.			Ratio per 1,000 of Strength.					
Commissioned Officers.	Non-commissioned Officers.	Privates.	Deaths.			Invalids.		
			Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
34	65	413	17.28	18.56	14.79	83.95	38.92	42.70
33	63	447	13.22	27.05	14.73	72.69	37.59	46.35
29	57	441	20.36	33.03	18.75	65.61	34.23	46.44
26	62	405	6.93	19.88	14.36	60.05	37.35	41.56
40	12	226	10.57	4.96	9.68	84.56	7.45	23.78
24	33	253	9.41	13.51	10.21	56.47	21.22	27.78
27	44	277	5.71	15.77	9.49	51.43	36.51	27.70
26	48	299	7.73	23.08	8.48	67.01	39.57	31.72
25	60	290	10.66	15.77	7.54	66.67	47.32	29.95
20	52	199	7.71	18.47	7.66	51.41	41.76	20.61
28	50	325	11.60	18.93	11.57	64.97	33.81	33.88
29	47	220	6.42	26.44	11.56	62.10	31.86	17.79

ABSTRACT No. XXX.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed at BOMBAY during

Average Strength, 11,000.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.			In the Com- mand.	Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.	
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	{ Small-pox -	2	—	—	—	—	—	·23
	{ Other Eruptive Fevers -	6	1	—	1	—	—	1'04
	{ Enteric Fever -	134	46	—	46	—	—	16'59
	{ Other Continued Fevers -	1,128	3	—	3	—	—	40'31
	{ Yellow Fever -	—	—	—	—	—	—	—
	{ Cholera -	4	4	—	4	—	—	·05
	{ Dysentery -	250	7	—	7	12	2	15'79
	{ Other Diseases -	3	—	—	—	—	—	·14
	Total -	1,527	61	—	61	12	2	74'11
Sub-Group II.—Malarial Fevers -		4,062	1	—	1	13	—	121'74
Sub-Group III.—Septic Diseases -		7	—	—	—	—	—	·23
Sub-Group IV.	{ Syphilis, Primary -	1,138	—	—	—	—	—	90'44
	{ Secondary -	369	—	—	—	13	4	31'63
	{ Gonorrhoea -	1,689	—	—	—	3	1	109'84
	Total -	3,226	—	—	—	16	5	231'91
Sub-Group V.—Hydrophobia, &c. -		2	2	—	2	—	—	·01
GROUP "B."								
Sub-Group I.—Parasitic Diseases -		61	—	—	—	—	—	1'83
Sub-Group II.	{ Scurvy -	26	—	—	—	3	—	2'04
	{ Alcoholism -	101	3	—	3	1	—	3'97
GROUP "C."								
Debility, &c. -		427	—	—	—	64	16	25'17
GROUP "D."								
Rheumatism -		329	3	—	3	14	5	23'13
Tubercular Diseases -		69	7	4	11	18	12	7'66
Other Diseases -		224	2	—	2	7	1	12'27
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases -		151	1	—	1	17	6	9'01
{ Mental -		30	—	—	—	9	16	3'23
2. Eye -		186	—	—	—	10	9	13'07
3 & 4. Other Organs of Special Senses -		182	—	—	—	18	9	9'83
5. Circulatory System -		220	5	—	5	36	15	18'64
6. Respiratory -		414	8	—	8	13	4	26'64
7. Digestive -		1,686	16	2	18	22	4	66'56
8. Lymphatic and Glandular System -		275	1	—	1	2	3	25'71
9. Urinary System -		35	1	1	2	5	2	3'95
10. Generative -		627	—	—	—	4	4	31'63
11. Organs of Locomotion -		74	—	—	—	8	4	5'36
12. Connective Tissue -		267	—	—	—	—	—	10'82
13. Skin -		741	—	—	—	4	—	29'90
III.—POISONS -		4	1	—	1	—	—	·16
IV.—INJURIES.								
1. General -		39	12	—	12	2	—	1'96
2. Local -		1,359	16	—	16	11	4	62'74
3. In Action -		—	—	—	—	—	—	—
No appreciable disease -		17	—	—	—	—	—	·54
Cause unknown (refers to deaths only) -		—	—	—	—	—	—	—
General Total -		16,308	140	7	147	309	121	613'81
Average of 10 years, 1870-85 -		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratio for the that for

ABSTRACT No. XXXI.—The following TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, shows the ADMISSIONS and DEATHS which took place in the PRINCIPAL STATIONS in the BOMBAY COMMAND during the Year 1886.

Divisions and Districts.	Stations.	Average Annual Strength.	Number of Admissions.	Number of Deaths.	Ratio per 1,000 of the Strength.			
					Admissions.	Deaths.	Average of 10 Years. 1876-85.	
							Admissions.	Deaths.
Presidency	Colaba -	746	1,297	9	1738·6	12·06	1700·4	15·51
	Deolali -	484	697	8	1440·1	16·53	1369·0	18·07
	Aden -	849	968	11	1140·2	12·96	1007·4	14·48
Sind	Karachi -	845	1,281	18	1516·0	21·30	2010·5	19·00
	Hyderabad -	465	866	3	1862·4	6·45	1702·7	11·60
Poona	Poona -	1,543	1,915	16	1241·1	10·37	1528·8	11·14
	Kirkee -	725	799	7	1102·1	9·65	1498·2	11·15
	Ahmednagar -	775	977	3	1260·6	3·87	1748·1	14·05
	Satara -	173	280	2	1618·5	11·56	1604·8	6·83
Mhow	Mhow -	1,324	2,281	16	1722·8	12·08	1822·6	9·47
	Nasirabad -	705	1,200	9	1702·1	12·76	1739·4	22·49
	Neemuch -	488	951	3	1948·8	6·15	2294·8	16·20
	Asirgarh -	124	296	1	2387·1	8·06	1867·3	15·70
	Indore -	96	167	1	1739·6	10·42	2060·4	18·56
	Ahmedabad -	264	573	8	2170·5	30·30	1859·8	18·03
	Deesa -	457	699	13	1529·5	28·45	1332·2	13·29
	Khundwa -	2	—	—	—	—	—	—
Quetta	*Quetta -	351	460	7	1310·5	19·94	†1716·3	†45·51
	Sanitaria -	240	509	3	2120·8	12·50	1869·2	25·53
	On the march, &c. -	344	152	2	441·9	5·81	773·7	23·07
	Total -	11000	16368	140	1488·0	12·73	—	—

* For three months only, and includes Harnai and Sibi.

† For three years only.

ABSTRACT XXXII.

ARMY MEDICAL DEPARTMENT

ABSTRACT No. XXXII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL
of DISEASES in each of the ADMINISTRATIVE CIRCLES in the BOMBAY

Military Division.	Presi- dency.		Sind.		Poona.		Mhow.		Quetta.		Sani- taria.		Troops on March.		Total.	
Average Strength - - - -	2,079		1,310		3,216		3,460		351		240		344		11,900	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.																
GROUP "A."																
Sub-Group I. { Small-pox - - - -	4	1	—	—	—	—	2	—	—	—	—	—	—	—	2	—
Other Eruptive Fevers - -	11	4	35	6	23	9	63	28	1	1	1	—	—	—	134	46
Enteric Fever - - - -	244	—	184	—	323	3	332	—	7	—	23	—	—	—	1,128	3
Other Continued Fever - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever - - - -	2	2	—	1	—	—	1	—	1	1	—	—	—	—	4	4
Cholera - - - -	52	2	87	4	48	—	52	1	5	—	4	—	2	—	250	7
Dysentery - - - -	1	—	—	—	2	—	—	—	—	—	—	—	—	—	3	—
Other Diseases - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - - - -	314	9	316	11	396	12	452	27	14	2	33	—	2	—	1,527	61
Sub-Group II.—Malarial Fevers - -	466	—	564	—	918	—	1674	—	198	1	206	—	36	—	4,062	1
Sub-Group III.—Septic Diseases - -	—	—	1	—	2	—	3	—	—	—	—	—	1	—	7	—
Sub-Group IV. { Syphilis, Primary - -	211	—	197	—	202	—	526	—	14	—	15	—	23	—	1,188	—
" Secondary - - - -	63	—	49	—	75	—	162	—	2	—	16	—	2	—	569	—
Gonorrhœa - - - -	282	—	240	—	457	—	627	—	13	—	26	—	24	—	1,609	—
Total - - - -	556	—	486	—	734	—	1315	—	29	—	57	—	49	—	3,226	—
Sub-Group V.—Hydrophobia, &c. - -	—	—	—	—	—	—	2	2	—	—	—	—	—	—	2	2
GROUP "B."																
Sub-Group I.—Parasitic Diseases - -	18	—	6	—	18	—	18	—	1	—	—	—	—	—	61	—
Sub-Group II. { Scurvy - - - -	6	—	2	—	15	—	1	—	1	—	1	—	—	—	26	—
Alcoholism - - - -	49	1	17	—	11	—	13	—	9	—	—	—	2	2	101	3
GROUP "C."																
Debility, &c. - - - -	121	—	33	—	101	—	113	—	37	—	22	—	—	—	427	—
GROUP "D."																
Rheumatism - - - -	63	—	21	—	68	1	148	2	15	—	13	—	1	—	329	3
Tubercular Diseases - - - -	41	3	4	1	17	2	6	—	—	—	1	1	—	—	69	7
Other Diseases - - - -	37	—	39	1	73	—	65	1	2	—	6	—	2	—	224	2
II.—LOCAL DISEASES.																
Diseases of the—																
1. Nervous System { Nervous Diseases - -	66	—	5	—	25	—	42	1	4	—	8	—	1	—	151	1
" Mental - - - -	19	—	—	—	7	—	4	—	—	—	—	—	—	—	30	—
2. Eye - - - -	35	—	18	—	82	—	45	—	2	—	3	—	1	—	186	—
3 & 4. Other Organs of Special Senses - -	49	—	21	—	70	—	38	—	3	—	1	—	—	—	182	—
5. Circulatory System - - - -	86	1	8	1	44	2	76	1	2	—	4	—	—	—	220	5
6. Respiratory - - - -	69	4	39	2	119	1	124	1	42	—	15	—	6	—	414	8
7. Digestive - - - -	323	4	148	2	438	4	672	3	37	1	56	2	12	—	1,686	16
8. Lymphatic and Glandular System - -	36	—	44	—	48	—	116	—	2	—	18	—	10	—	274	—
9. Urinary System - - - -	9	1	1	—	19	1	7	—	—	—	—	—	—	—	36	2
10. Generative - - - -	124	—	18	—	157	—	299	—	6	—	16	—	7	—	627	—
11. Organs of Locomotion - - - -	15	—	—	—	32	—	22	—	2	—	3	—	—	—	74	—
12. Connective Tissue - - - -	46	—	40	—	70	—	94	—	6	—	4	—	7	—	267	—
13. Skin - - - -	158	—	142	—	164	—	249	—	12	—	12	—	4	—	741	—
III.—POISONS																
IV.—INJURIES.																
1. General - - - -	7	3	10	2	1	1	13	6	2	—	—	—	6	—	39	12
2. Local - - - -	245	2	155	1	341	4	551	7	34	2	28	—	5	—	1,359	16
3. In Action - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease - - - -	2	—	9	—	1	—	3	—	—	—	2	—	—	—	17	—
Cause unknown (refers to deaths only) - -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Total - - - -	2,962	28	2,147	21	3,971	28	6,167	51	460	7	509	3	152	2	16,368	140

REPORT FOR 1886.

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OFFICER, showing the PREVALENCE and MORTALITY of the Different Classes
COMMAND, with the Ratios per 1,000 of the Strength for the Year 1886.

Presidency.		Sind.		Poona.		Mhow.		Quetta.		Sanitaria.		Troops on March.		Total.	
Ratio per 1,000 of mean Strength.															
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
—	—	—	—	—	—	.6	—	—	—	—	—	—	—	.2	—
1.9	.48	—	—	—	—	.6	—	—	—	—	—	—	—	.5	.09
5.3	1.92	26.7	4.58	7.1	2.79	18.2	7.51	2.8	2.84	4.2	—	—	—	12.2	4.18
117.4	—	148.1	—	100.4	.93	95.9	—	19.9	—	116.6	—	—	—	102.5	.27
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1.0	.96	—	.76	—	—	.3	—	2.8	2.84	—	—	—	—	.4	.36
25.0	.96	66.4	3.05	14.9	—	15.0	.29	14.2	—	16.7	—	5.8	—	22.7	.64
.5	—	—	—	.6	—	—	—	—	—	—	—	—	—	.3	—
151.0	4.32	241.2	8.40	123.1	3.73	130.6	7.80	39.9	5.69	137.5	—	5.8	—	138.8	5.54
224.1	—	430.5	—	235.4	—	483.7	—	564.1	2.84	858.2	—	104.6	—	369.3	.09
—	—	.8	—	.6	—	.9	—	—	—	—	—	2.9	—	.6	—
101.5	—	150.4	—	62.8	—	152.0	—	39.9	—	62.5	—	66.9	—	108.0	—
30.3	—	37.4	—	23.3	—	46.8	—	5.7	—	66.6	—	5.8	—	33.5	—
135.6	—	183.2	—	142.1	—	181.2	—	37.0	—	108.3	—	69.8	—	151.7	—
267.4	—	371.0	—	228.2	—	380.0	—	82.6	—	237.5	—	142.4	—	293.3	—
—	—	—	—	—	—	.6	.59	—	—	—	—	—	—	.2	.18
8.6	—	4.6	—	5.6	—	5.2	—	2.8	—	—	—	—	—	5.5	—
2.9	—	1.5	—	4.7	—	.3	—	2.8	—	4.2	—	—	—	2.4	—
23.6	.48	13.0	—	3.4	—	3.7	—	25.6	—	—	—	5.8	5.81	9.2	.27
58.2	—	25.1	—	31.4	—	32.6	—	105.4	—	91.6	—	—	—	38.8	—
30.3	—	16.0	—	21.1	.31	42.8	.59	42.7	—	54.1	—	2.9	—	29.9	.27
19.7	1.44	3.0	.76	5.2	.62	1.7	—	—	—	4.2	4.16	—	—	6.3	.64
17.8	—	29.8	.76	22.7	—	18.8	.29	5.7	—	25.0	—	5.8	—	20.4	.18
31.7	—	3.8	—	7.8	—	12.1	.29	11.4	—	33.3	—	2.9	—	13.7	.09
9.1	—	—	—	2.2	—	1.1	—	—	—	—	—	—	—	2.7	—
16.8	—	13.7	—	25.5	—	13.0	—	5.7	—	12.5	—	2.9	—	16.9	—
23.6	—	16.0	—	21.8	—	11.0	—	8.5	—	4.2	—	—	—	16.5	—
41.4	.48	6.1	.76	13.7	.62	22.0	.29	5.7	—	16.7	—	—	—	20.0	.45
33.3	1.92	29.8	1.53	37.0	.31	35.8	.29	119.6	—	62.5	—	17.4	—	37.6	.73
155.4	1.92	113.0	1.53	136.2	1.24	194.2	.87	105.4	2.84	233.3	8.32	34.9	—	153.3	1.45
17.3	—	33.6	—	14.9	—	33.5	—	5.7	—	75.0	—	29.1	—	24.9	—
4.3	.48	.8	—	5.9	.31	2.0	—	—	—	—	—	—	—	3.3	.18
59.6	—	13.7	—	48.8	—	86.4	—	17.1	—	66.6	—	20.3	—	57.0	—
7.2	—	—	—	9.9	—	6.3	—	5.7	—	12.5	—	—	—	6.7	—
22.1	—	30.5	—	21.8	—	27.2	—	17.1	—	16.7	—	20.3	—	24.3	—
76.0	—	108.4	—	51.0	—	72.0	—	34.2	—	50.0	—	11.6	—	67.4	—
1.0	—	—	—	—	—	.6	—	—	2.84	—	—	—	—	.4	.09
3.4	1.44	7.6	1.53	.3	.31	3.7	1.73	5.7	—	—	—	17.4	—	3.5	1.09
117.8	.96	118.3	.76	106.0	1.24	159.2	2.02	96.9	5.69	116.3	—	14.5	—	123.5	1.45
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1.0	—	6.9	—	.3	—	.9	—	—	—	8.3	—	—	—	1.5	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1424.7	13.47	1638.9	16.03	1234.8	8.71	1782.4	14.74	1310.5	19.94	2120.8	12.50	441.9	5.81	1488.0	12.73

ABSTRACT No. XXXIII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the Year 1886.

Divisions and Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Presidency	Colaba	4	1	1	—	1	1	—	—	6	2
	Deolali	—	—	—	—	—	—	—	—	—	—
	Karachi	—	—	—	—	19	3	—	—	32	5
Sind	Hyderabad	—	—	1	—	6	1	—	—	13	1
	Poona	1	1	—	—	—	—	—	—	2	—
Poona	Kirkee	—	—	—	—	5	2	—	—	7	—
	Ahmednagar	1	—	1	—	3	2	—	—	5	—
	Mhow	1	1	—	—	—	—	—	—	2	—
	Nasirabad	2	—	4	—	5	1	—	—	11	—
Mhow	Neemuch	—	—	1	—	—	—	—	—	20	—
	Ahmedabad	—	—	—	—	1	—	—	—	1	—
	Deesa	5	—	2	—	14	3	—	—	21	—
	Mount Abou	—	—	1	—	—	—	—	—	1	—
Quetta	Quetta	1	1	—	—	—	—	—	—	2	—
		19	4	28	10	62	21	25	11	134	46

ABSTRACT No. XXXIV.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the Year 1886.

Divisions and Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Presidency	Colaba	—	—	—	—	—	—	—	—	—	—
	Deolali	—	—	—	—	—	—	—	—	—	—
	Aden	—	—	—	—	—	—	—	—	—	—
Sind	Karachi	—	1	—	—	—	—	—	—	—	1
	Hyderabad	—	—	—	—	—	—	—	—	—	—
	Poona	—	—	—	—	—	—	—	—	—	—
Poona	Kirkee	—	—	—	—	—	—	—	—	—	—
	Ahmednagar	—	—	—	—	—	—	—	—	—	—
	Satara	—	—	—	—	—	—	—	—	—	—
	Mhow	—	—	—	—	—	—	—	—	—	—
	Nasirabad	—	—	—	—	—	—	—	—	—	—
	Neemuch	—	—	—	—	—	—	—	—	—	—
Mhow	Asirgarh	—	—	—	—	—	—	—	—	—	—
	Indore	—	—	—	—	1	—	—	—	1	—
	Ahmedabad	—	—	—	—	—	—	—	—	—	—
	Deesa	—	—	—	—	—	—	—	—	—	—
	Khundwa	—	—	—	—	—	—	—	—	—	—
Quetta	Quetta* (Harnai)	1	1	—	—	—	—	—	—	2	—
	Sanitaria	—	—	—	—	—	—	—	—	—	—
	On the March, &c.	—	—	—	—	—	—	—	—	—	—
	Total	1	2	—	—	1	—	2	2	4	4

* For three months only.

ABSTRACT No. XXXV.—Table taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE of DYSENTERY, DIARRHŒA, HEPATITIS, and ABSCESS OF LIVER in each DIVISION in the BOMBAY COMMAND for the Year 1886, compiled from Monthly Sick Returns.

Divisions and Districts.	Presidency.		Sind.		Poona.		Mhow.		Quetta.*		On the March, &c.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Strength.	2,079		1,310		3,324		3,592		351		344		11,000	
Diseases.														
Dysentery -	52	2	87	4	52	—	52	1	5	—	2	—	250	7
Diarrhea -	72	—	58	—	132	—	219	—	13	—	9	—	503	—
Hepatitis and Abscesses of Liver -	39	2	12	2	46	4	46	4	3	1	—	—	146	13
Total	163	4	157	6	230	4	317	5	21	1	11	—	899	20

Ratio per 1,000 of Strength.														
Dysentery -	25.0	.96	66.4	3.05	16.2	—	15.0	.29	14.2	—	5.8	—	22.7	.64
Diarrhea -	34.6	—	44.2	—	41.0	—	63.3	—	37.0	—	26.2	—	45.7	—
Hepatitis and Abscesses of Liver -	18.7	.96	9.2	1.53	14.3	1.24	13.3	1.15	8.5	2.84	—	—	13.3	1.18
Total	78.4	1.92	119.8	4.58	71.5	1.24	91.6	1.44	59.8	2.84	32.0	—	81.7	1.82

* For three months only.

ABSTRACT No. XXXVI.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the PREVALENCE and MORTALITY in the BOMBAY COMMAND, due to DYSENTERY, DIARRHŒA, HEPATITIS, and ABSCESS OF LIVER in each Quarter of the Year 1886, compiled from Monthly Sick Returns.

Quarters.	Dysentery.				Diarrhœa.				Hepatitis and Abscess of Liver.				Total.			
	Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter	46	1	4.1	.09	77	—	6.8	—	23	1	2.0	.09	146	2	12.9	.18
2nd "	38	—	3.5	—	150	—	14.8	—	27	2	2.5	.02	215	2	21.3	.02
3rd "	92	3	8.7	.28	167	—	15.9	—	42	5	4.0	.47	301	8	28.6	.76
4th "	74	3	6.4	.26	109	—	9.5	—	54	5	4.7	.43	237	8	20.6	.07
Total for Year	250	7	22.7	.64	503	—	45.7	—	146	13	13.3	1.18	899	20	81.7	1.82

ABSTRACT XXXVII.

ABSTRACT No. XXXVII.—TABLE taken from the REPORT of the PRINCIPAL
in the THREE GRADES of COMMISSIONED OFFICERS, NON-COMMISSIONED
Years, in the BOMBAY COMMAND.

Years.	Average Strength.			Number of Deaths.		
	Commissioned Off- cers.	Non-commissioned Officers.	Privates.	Commissioned Off- cers.	Non-commissioned Officers.	Privates.
1876 - - -	368	1,173	9,111	5	18	110
1877 - - -	375	1,160	8,989	4	13	108
1878 - - -	364	1,316	8,588	3	34	166
1879 - - -	373	1,282	8,502	3	21	136
1880 - - -	336	1,279	7,921	4	42	168
1881 - - -	314	1,213	8,773	5	19	108
1882 - - -	306	1,186	9,011	6	17	89
1883 - - -	339	1,324	9,859	2	18	98
1884 - - -	346	1,345	9,379	5	45	159
1885 - - -	365	1,551	10,099	6	49	231
Average for 10 years -	349	1,283	9,023	4	28	137
1886 - - -	362	*1,097	*9,168	3	25	115

* Figures furnished by the Adjutant-General.

MEDICAL OFFICER, showing the COMPARATIVE MORTALITY and INVALIDING OFFICERS, and PRIVATES for the Year under Report, and for the Ten previous

Invalided.			Ratio per 1,000.					
Commissioned Officers.	Non-commissioned Officers.	Privates.	Deaths.			Invalids.		
			Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
43	49	433	13·59	13·59	15·27	116·85	41·56	47·52
35	63	427	10·67	10·67	11·21	93·33	54·81	47·50
44	86	492	8·24	25·84	19·33	120·88	65·35	57·29
20	75	521	8·04	16·38	15·99	53·62	58·50	61·28
21	51	427	10·92	32·83	21·20	57·37	39·87	53·90
22	75	449	15·92	15·66	12·30	70·06	61·83	51·18
15	48	310	19·61	14·33	9·88	49·02	40·47	34·40
21	57	364	5·90	13·59	9·94	61·95	43·05	36·92
34	62	276	14·45	33·45	16·95	98·26	46·10	29·43
25	68	270	16·44	31·59	22·87	68·49	43·84	26·73
28	3	397	11·46	21·09	15·18	80·20	49·10	43·99
16	47	263	8·29	22·79	12·54	44·20	42·84	28·69

ABSTRACT No. XXXVIII.—TABLE showing the AVERAGE STRENGTH, SICK among the TROOPS stationed in EGYPT during the Year 1886, with

Average Strength, 11,062.		Admissions into Hospital.	Deaths.			Invalids.		Average Number Constantly Sick.
Diseases.	In the Com- mand.		Of Invalids.	Total.	Number sent Home.	Number finally Dis- charged the Service.		
I.—GENERAL DISEASES.								
GROUP "A."								
Sub-Group I.	Small-pox	51	3	—	3	—	—	3.30
	Other Eruptive Fevers	7	—	—	—	—	—	.60
	Enteric Fever	733	241	—	241	274	1	104.85
	Other Continued Fevers	1,818	—	—	—	50	—	80.38
	Yellow Fever	—	—	—	—	—	—	—
	Cholera	—	—	—	—	—	—	—
	Dysentery	796	33	2	35	98	4	68.83
Other Diseases	43	1	—	1	—	—	2.13	
Total		3,448	278	2	280	422	5	254.11
Sub-Group II.—Malarial Fevers		154	—	—	—	10	1	7.74
Sub-Group III.—Septic Diseases		37	3	—	3	1	—	2.35
Sub-Group IV.	Syphilis, Primary	805	—	—	—	2	—	67.22
	" Secondary	255	—	—	—	13	6	18.92
	Gonorrhoea	1,085	—	—	—	2	—	59.42
Total		2,205	—	—	—	17	6	145.56
Sub-Group V.—Hydrophobia, &c.		—	—	—	—	—	—	—
GROUP "B."								
Sub-Group I.—Parasitic Diseases		57	1	—	1	—	—	1.58
Sub-Group II.	Scurvy	4	—	—	—	—	—	.26
	Alcoholism	74	1	—	1	—	—	3.42
GROUP "C."								
Debility, &c.		608	—	—	—	140	45	36.75
GROUP "D."								
Rheumatism		339	3	—	3	32	6	23.56
Tubercular Diseases		39	3	3	6	33	32	6.58
Other Diseases		76	1	—	1	3	1	4.19
II.—LOCAL DISEASES.								
Diseases of the—								
1. Nervous System { Nervous Diseases		122	6	1	7	19	7	7.53
{ Mental "		15	—	—	—	15	25	2.03
2. Eye		726	—	—	—	17	6	24.21
3 & 4. Other Organs of Special Senses		160	—	—	—	12	11	7.76
5. Circulatory System		189	2	1	3	72	64	15.78
6. Respiratory "		498	19	1	20	25	15	33.06
7. Digestive		2,223	20	3	23	53	12	96.67
8. Lymphatic and Glandular System		191	—	—	—	5	1	16.03
9. Urinary System		31	1	—	1	5	4	1.92
10. Generative "		774	—	—	—	5	7	45.12
11. Organs of Locomotion		56	—	—	—	6	7	3.36
12. Connective Tissue		272	—	—	—	3	2	11.44
13. Skin		627	—	—	—	6	—	28.45
III.—POISONS		2	1	—	1	—	—	.05
IV.—INJURIES.								
1. General		73	41	—	41	3	—	3.73
2. Local		993	15	—	15	17	9	45.51
3. In Action		1	2	—	2	7	4	1.78
No appreciable disease		36	—	—	—	—	—	1.02
Cause unknown (refers to deaths only)		—	—	—	—	—	—	—
General Total		14,070	397	11	408	928	270	820.54
Average of 8 years 1883-85		—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The ratios for the year 1886 to 1887 in

ADMISSIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					*Average Ratio per 1,000 from 18 to 18				
Admis- sions.	Deaths.	Invalids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.	Admis- sions.	Deaths.	Inva- lids sent Home.	Invalids finally Dis- charged.	Con- stantly Sick.
4.6	.27	—	—	.30	—	—	—	—	—
.6	—	—	—	.05	—	—	—	—	—
66.3	21.79	24.77	.09	9.48	—	—	—	—	—
164.3	—	4.52	—	7.27	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
72.0	3.16	8.86	.36	5.68	—	—	—	—	—
3.9	.09	—	—	.19	—	—	—	—	—
311.7	25.31	38.15	.45	22.97	—	—	—	—	—
13.9	—	.90	.09	.70	—	—	—	—	—
3.3	.27	.09	—	.21	—	—	—	—	—
78.2	—	.18	—	6.08	—	—	—	—	—
23.0	—	1.18	.54	1.71	—	—	—	—	—
98.1	—	.18	—	5.37	—	—	—	—	—
199.3	—	1.54	.54	13.16	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
5.1	.09	—	—	.14	—	—	—	—	—
.4	—	—	—	.02	—	—	—	—	—
6.7	.09	—	—	.22	—	—	—	—	—
60.4	—	12.66	4.07	3.32	—	—	—	—	—
30.6	.27	2.89	.54	2.13	—	—	—	—	—
3.5	.54	2.98	2.89	.59	—	—	—	—	—
6.9	.09	.27	.09	.38	—	—	—	—	—
11.0	.63	1.72	.63	.68	—	—	—	—	—
1.3	—	1.36	2.26	.18	—	—	—	—	—
65.6	—	1.54	.54	2.19	—	—	—	—	—
14.5	—	1.09	1.00	.70	—	—	—	—	—
15.3	.27	6.51	5.79	1.43	—	—	—	—	—
45.0	1.81	2.26	1.36	2.99	—	—	—	—	—
200.9	2.08	4.79	1.09	7.84	—	—	—	—	—
17.3	—	.45	.09	1.45	—	—	—	—	—
2.8	.09	.45	.36	.17	—	—	—	—	—
70.0	—	.45	.63	4.08	—	—	—	—	—
5.1	—	.54	.63	.30	—	—	—	—	—
21.6	—	.27	.18	1.04	—	—	—	—	—
56.7	—	.54	—	2.57	—	—	—	—	—
.2	.09	—	—	—	—	—	—	—	—
6.6	3.71	.27	—	.34	—	—	—	—	—
89.8	1.36	1.54	.81	4.12	—	—	—	—	—
.1	.18	.63	.36	.16	—	—	—	—	—
3.3	—	—	—	.09	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1271.9	36.88	83.89	24.40	74.17	—	—	—	—	—
1326.8	26.21	102.31	33.98	77.95	—	—	—	—	—

1886 will be given in the Report for 1887; the average ratios for the two years that for 1888, &c., &c.

ABSTRACT No. XXXIX.—TABLE showing the **AVERAGE STRENGTH**, SHIP proceeding on and returning from Foreign Service, and proceeding Strength during the Year 1886.

Strength of W.O., N.C.O., and Men :	Passage Out.		Passage Home.	
	24,442 1,442		15,325 741	
	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.				
GROUP "A."				
Sub-Group I.	Small-pox	—	—	—
	Other Eruptive Fevers	7	—	—
	Enteric Fever	2	9	—
	Other Continued Fevers	22	37	—
	Yellow Fever	—	—	—
	Cholera	—	6	4
	Dysentery	—	15	—
	Other Diseases	1	—	1
Total		32	67	5
Sub-Group II.—Malarial Fevers		6	91	2
Sub-Group III.—Septic Diseases		3	1	—
Sub-Group IV.	Syphilis, Primary	380	100	—
	Secondary	61	8	—
	Gonorrhoea	410	109	—
Total		851	217	—
Sub-Group V.—Hydrophobia, &c.		—	—	—
GROUP "B."				
Sub-Group I.—Parasitic Diseases		—	1	—
Sub-Group II.	Scurvy	—	—	—
	Alcoholism	—	7	—
GROUP "C."				
Debility, &c.		13	21	—
GROUP "D."				
Rheumatism		26	14	—
Tubercular Diseases		2	2	—
Other Diseases		25	3	—
II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous System { Nervous Diseases		5	6	2
{ Mental " "		—	—	—
2. Eye		29	14	—
3 & 4. Other Organs of Special Senses		8	4	—
5. Circulatory System		5	2	—
6. Respiratory " "		123	36	1
7. Digestive " "		112	65	—
8. Lymphatic and Glandular System		46	21	—
9. Urinary System		1	1	—
10. Generative " "		223	45	—
11. Organs of Locomotion		9	4	—
12. Connective Tissue		38	27	—
13. Skin		218	49	—
III.—POISONS.				
IV.—INJURIES.				
1. General		2	1	2
2. Local		113	45	—
3. In Action		—	—	—
Not yet diagnosed		2	—	—
Cause unknown (refers to deaths only)		—	—	—
General Total		1,892	744	12

ADMISSIONS into HOSPITAL, and DEATHS among the TROOPS ON BOARD from one Colony or Station abroad to another, with the Ratio per 1,000 of the

Intercolonial.		Ratio per 1,000 of the Strength.					
11,172 324		Passage Out.		Passage Home.		Intercolonial.	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
—	—	—	—	—	—	—	—
1	—	4·8	—	—	—	3·1	—
20	—	1·4	·69	12·2	—	—	—
—	—	15·3	—	49·9	—	61·7	—
—	—	—	—	—	—	—	—
1	—	—	—	8·1	5·39	—	—
—	—	—	—	20·2	—	3·1	—
—	—	·7	—	—	1·35	—	—
22	—	22·2	·60	90·4	6·74	67·9	—
1	—	4·2	—	122·8	2·69	3·1	—
—	—	2·1	—	1·4	—	—	—
96	—	263·5	—	135·0	—	296·3	—
8	—	42·3	—	10·8	—	24·7	—
83	—	284·3	—	147·1	—	256·2	—
187	—	590·1	—	292·9	—	577·2	—
—	—	—	—	—	—	—	—
—	—	—	—	1·4	—	—	—
—	—	—	—	9·4	—	—	—
1	—	9·0	—	28·3	—	3·1	—
3	—	18·0	—	18·9	—	9·2	—
—	—	1·4	—	2·7	—	—	—
2	—	17·3	—	4·0	—	6·2	—
3	1	3·5	—	8·1	2·69	9·2	3·09
7	—	20·1	—	18·9	—	21·6	—
1	—	5·5	—	5·4	—	3·1	—
—	—	3·5	—	2·7	—	—	—
13	—	85·3	—	48·0	1·35	40·1	—
33	—	77·7	—	87·7	—	101·8	—
7	—	31·9	—	28·3	—	21·6	—
—	—	·7	—	1·4	—	—	—
21	—	154·6	—	60·7	—	64·8	—
2	—	6·2	—	5·4	—	6·2	—
6	—	26·3	—	36·4	—	18·5	—
13	—	151·2	—	66·1	—	40·1	—
—	—	—	—	—	—	—	—
1	—	1·4	—	1·4	2·69	3·1	—
17	—	78·4	—	60·7	—	52·5	—
—	—	—	—	—	—	—	—
—	—	1·4	—	—	—	—	—
—	—	—	—	—	—	—	—
340	1	1312·0	·69	1004·0	16·16	1049·3	3·09

ABSTRACT No. XL.—ON THE INFLUENCE OF AGE ON THE MORTALITY.—Table showing the Death Rates of the Warrant Officers, Non-commissioned Officers and Men, at the several Ages, arranged by quinquennial Periods, in the several Foreign Commands.

Commands.	Under 20 Years.			20 and under 25.			25 and under 30.			30 and under 35.			35 and under 40.			40 and upwards.								
	Strength.	Ratio per 1,000.		Strength.	Ratio per 1,000.		Strength.	Ratio per 1,000.		Strength.	Ratio per 1,000.		Strength.	Ratio per 1,000.		Strength.	Ratio per 1,000.							
		1886.	1870-85.		Died.	1886.		1870-85.	Died.		1886.	1870-85.		Died.	1886.		1870-85.	Died.	1886.	1870-85.	Died.	1886.	1870-85.	
Gibraltar	859	2	2-33	4-75	2,176	19	8-73	4-76	8-66	9	8-25	5-25	267	3	11-24	7-63	116	1	8-62	8-63	23	2	80-96	22-42
Malta	704	3	4-26	6-56	2,434	15	6-16	9-73	9-92	4	4-03	8-61	395	3	7-59	8-90	179	1	5-59	12-41	32	—	—	11-88
Cyprus	52	1	19-23	4-33*	366	5	13-66	13-76*	149	—	—	12-90*	35	1	23-57	17-46*	15	—	—	24-24*	2	—	—	—
Egypt	939	27	28-75	7-06†	6,170	253	41-81	26-34†	2,586	78	30-16	17-41†	875	18	20-57	18-02†	396	12	30-30	18-74†	96	4	41-67	42-64†
Canada	137	1	7-30	99	603	1	1-66	3-70	310	—	—	4-08	155	—	—	7-27	62	—	—	12-68	16	1	62-50	14-55
Bermuda	170	—	1-91‡	641	6	9-36	5-52‡	237	6	25-32	10-09‡	116	—	—	—	8-57‡	47	2	42-55	6-91‡	16	1	62-50	38-96‡
West Indies	34	—	12-82§	653	8	12-25	17-12§	211	5	23-70	14-38§	82	1	12-10	21-50§	36	—	—	10-03§	4	1	250-00	22-09§	
Cape of Good Hope and St. Helena.	188	—	6-01	1,894	10	5-28	8-63	1,137	4	3-32	9-30	339	1	2-95	9-74	115	—	—	7-58	27	1	37-04	11-85	
Mauritius	3	—	—	—	226	4	17-70	10-93§	119	3	25-21	17-41§	45	2	44-44	10-30§	20	—	—	9-26§	1	—	—	92-59§
Ceylon	47	—	3-51	564	3	5-32	10-85	231	5	21-64	10-90	62	1	16-13	13-12	32	1	31-25	24-03	13	—	—	35-50	
China and Straits Settlements.	332	—	5-26	933	11	11-79	5-98	613	7	11-42	9-06	243	4	10-46	8-75	105	2	19-05	17-23	43	1	23-26	22-88	
India	2,967	47	15-84	7-61	20,181	459	17-43	15-79	17,913	261	14-57	14-47	6,311	84	13-31	18-13	2,818	53	20-58	10-75	708	15	21-19	38-53

* For seven years only (1870 to 1885). † For three years only (1883 to 1885). ‡ For nine years only (1876 and 1878 to 1885).
§ For five years only (1878 and 1882 to 1885). || For nine years only (1876 and 1878 to 1885).

ABSTRACT No. XLI.—TABLE showing the various Corps which served in the UNITED KINGDOM during the Year 1886, and some of the most important of their HEALTH STATISTICS.

Brigade or Bat- talion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Amount Sick.	Ratio per 1,000 of Mean Strength.				Average Time to each Sick.	Average Duration of each Case of Sick ness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.			
							Admitted.	Died.	Invalided.	Average Constantly Sick.							
1st 2nd	HOUSEHOLD CAVALRY.																
	Life Guards	-	-	-	408	281	2	7	14.21	688.7	4.80	17.15	34.83	13.71	18.46	London, 3 month ; Windsor, 9 months	70
	Life Guards	-	-	-	397	279	2	18	14.40	702.8	5.04	45.34	36.27	13.24	18.84	Windsor, 3 months; London, 9 months	70
	Royal Horse Guards	-	-	-	422	244	2	7	15.66	578.2	4.74	16.69	37.18	13.57	23.47	London, 12 months	70
	Household Cavalry detached	-	-	-	46	1	-	-	.10	-	-	-	-	-	-	Detachments at Aldershot, Hythe, and Chatham.	
	Total Household Cavalry	-	-	-	1,275	805	6	32	44.40	631.4	4.70	25.10	34.82	12.71	20.13		
4th 5th 1st 2nd 3rd 4th	CAVALRY.																
	Dragoon Guards	-	-	-	462	390	5	16	21.34	844.2	10.82	34.63	46.19	16.86	19.97	Manchester, 4 months; Dublin, 8 months.	4
	Dragoon Guards	-	-	-	592	380	4	9	16.82	641.9	6.75	15.24	23.41	10.37	16.15	Newbridge, 6 months; Dundalk, 6 months.	30
	Royal Dragoons	-	-	-	556	466	1	9	25.35	838.1	1.80	16.19	46.69	16.64	19.85	Dundalk, 4½ months; Aldershot, 7½ months.	30
	Royal Dragoons	-	-	-	459	461	-	10	27.99	1004.3	-	21.79	60.98	22.26	22.16	Aldershot, 12 months	30
	Hussars	-	-	-	433	351	1	16	22.63	810.6	2.31	36.95	52.03	18.99	23.43	York, 4 months; Manchester, 8 months; Detachment, Liverpool.	7
	Hussars	-	-	-	450	377	2	4	19.04	837.8	4.44	8.88	42.31	15.44	18.43	Headquarters, Piershill, 12 months; Detachment at Glasgow	8

Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
CAVALRY—cont.														
5th	Lancers	567	473	2	16	25.58	792.3	3.35	26.80	42.85	days, 15.64	days, 19.74	Headquarters, Brighton, 12 months; Detachments at Aldershot and Hildesheim.	13
7th	Hussars	513	471	5	14	24.40	918.1	9.74	27.29	47.56	17.36	18.91	Headquarters, Hounslow, 9 months; Shorncliffe, 2 months; Detachments, Hampton Court and London, 1 month; York, 4 months.	4
9th	Lancers	460	390	2	12	29.23	847.8	4.35	26.09	63.54	23.19	27.36	Shorncliffe, 7 months; York, 4 months.	1
10th	Hussars	473	510	3	7	27.86	1078.3	6.34	14.80	58.90	21.50	19.94	Aldershot, 12 months; Detachments, Hounslow and London.	2
11th	Hussars	438	228	1	7	12.03	520.5	2.28	15.98	27.46	10.02	19.26	Ballicollig, 4 months; Carragh, 7 months; Detachment at Carragh, 1 month.	9
13th	Hussars	451	446	2	5	22.93	983.9	4.43	11.09	50.84	18.56	18.76	Norwich, 6 months; Colchester, 7 months.	1
14th	Hussars	107	110	1	5	5.61	1028.1	9.34	46.73	52.43	19.14	18.61	Shorncliffe, 1 month; Detachment, Colchester.	—
15th	Hussars	443	495	1	13	24.75	1094.8	2.26	29.35	55.87	20.39	18.63	Leeds, 12 months; Detachment at Birmingham.	5
16th	Lancers	433	489	2	14	34.28	1129.3	4.62	32.33	79.17	28.92	25.59	Dublin, 12 months; Cahir, 7 months; Detachments, Clonmel, Fethard, Limerick, and Waterford.	10
18th	Hussars	356	600	2	10	33.20	1079.2	3.60	17.93	59.71	21.79	20.20	Norwich, 6 months; Detachment at Colchester.	11
19th	Hussars	298	354	3	4	15.17	1187.9	10.07	13.42	50.91	18.58	15.64	Norwich, 6 months; Detachment at Colchester.	—
20th	Hussars	73	95	—	2	4.86	1301.4	—	27.40	68.59	24.30	18.67	Colchester, 5 months (detached).	—
21st	Hussars	572	416	2	10	18.69	727.2	3.46	17.45	32.67	11.92	16.38	Cahir, 4 months; Ballicollig, 7 months; Detachments at Clonmel, Kinsale, Limerick, and Waterford.	13
Cavalry Depôts		1,624	1,314	11	42	95.88	1117.0	6.77	25.86	59.04	21.55	19.29	Colchester, Canterbury, Shorncliffe - &c.	Since formation.
Other Corps		129	92	—	5	13.34	713.2	—	38.76	103.41	37.74	52.93	Aldershot, Woolwich, Hythe, Dublin, &c.	Various
Total Cavalry of the Line		10,119	9,968	50	280	580.88	880.9	4.94	23.73	51.47	18.79	20.23		

Bn. or Bat.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con-stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
ROYAL ARTILLERY.														
A.	Royal Horse Artillery	-	1,007	639	10	23	47.85	654.4	9.83	21.85	47.52	17.94	28.50	A. Battery, Woolwich; B. Aldershot; C. St. John's Wood and Aldershot; H., Aldershot; I., Dublin; K., Exeter; M., Newbridge.
B.	Royal Horse Artillery	-	1,102	995	5	31	65.75	902.9	4.54	23.13	59.68	21.78	24.12	A. Battery, Dublin; B., St. John's Wood; C., Dorchester; D., Woolwich; E., Exeter; Depot, Woolwich.
1st	Royal Artillery	-	1,816	1,598	11	48	103.41	879.9	6.06	26.43	56.94	20.78	23.63	C. Battery, Canterbury; H., Aldershot; I., Shorncliffe; J., Fermoyle; K., Woolwich; L., Shorncliffe; M., Woolwich; N., Newbridge; O., Athlone; V. Aldershot; W., Woolwich and Aldershot; Depot, Newcastle-on-Tyne.
2nd	Royal Artillery	-	1,653	1,493	4	47	83.27	903.6	2.42	28.43	50.37	18.38	30.37	H. Battery, Sheffield; I. and K., Woolwich; L., Curragh; N., Weedon; O., Coventry; P., Aldershot and Kilkenny; Q., Bristol; S., Ipswich; Depot, Colchester.
3rd	Royal Artillery	-	1,456	1,431	12	32	78.54	932.8	8.24	21.98	53.94	19.69	30.03	A. Battery, Frowbridge; B., Ipswich; C., Weedon; D., Aldershot and Chatham; E., Woolwich; F., Chatham; J., Dublin; S., Aldershot; Depot, Hilsa.
4th	Royal Artillery	-	1,228	1,330	6	22	68.25	1064.9	4.89	17.94	55.67	20.32	18.73	B. Battery, Limerick; F., Sheffield; J., Christchurch; K., Woolwich; M., Limerick; Q., Newport; R., Clonmel; S. Glasgow; Depot, Preston.

Brigade or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Sickness Con- stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
1st	ROYAL ARTILLERY—cont.													
	Royal Artillery, Northern Division -	447	395	6	8	23.08	883.6	13.42	17.90	51.63	days. 18.84	days. 21.83	No. 2 Battery, Plymouth; No. 4 Chatham; No. 10, Portsmouth; Depot, Sunderland.	
	Royal Artillery, Lancashire Division.	417	364	6	12	23.81	872.9	14.39	28.78	54.70	19.96	22.87	No. 3 Battery, Jersey; No. 6, Woolwich and Shoeburyness; No. 7, Cork Harbour; No. 8, Dover; No. 9, Jersey; Depot, Liverpool.	
	Royal Artillery, Eastern Division -	574	446	10	5	24.85	777.0	17.42	8.71	43.29	15.80	20.34	No. 2 Battery, Sheerness; No. 3, Channel Islands; No. 4, Portsmouth and Isle of Wight; No. 8, Sheerness; Depot, Colchester.	
	Royal Artillery, Cinque Ports Division.	509	394	6	9	20.91	774.0	11.79	17.68	41.08	14.99	19.37	No. 3 Battery, Devonport; No. 4, Pembroke Dock; No. 10, Gosport; Depot, Dover.	
	Royal Artillery, London Division -	575	397	3	13	27.40	690.4	5.22	23.61	47.65	17.39	25.19	No. 2 Battery, Shoeburyness and Woolwich; No. 3, Portsmouth; No. 4, Dover; No. 5, Dover; No. 7, Isle of Wight; No. 9, Weymouth and Portland; Depot, Woolwich.	
	Royal Artillery, Southern Division -	252	221	2	12	15.24	977.0	7.93	47.62	60.47	22.07	25.17	No. 4 Battery, Woolwich and Shoeburyness; No. 3, Dover; Depot, Gosport.	
	Royal Artillery, Western Division -	484	332	3	7	17.73	763.0	6.91	16.13	40.85	14.91	19.49	No. 2, Spike Island; No. 3, Camden Fort; No. 4, Dover; No. 6, Plymouth; Depot, Devonport.	
	Royal Artillery, Scottish Division -	446	321	9	5	20.28	719.7	20.18	11.21	46.47	16.60	23.06	No. 5 Battery, Woolwich; No. 7, Dover; No. 8, Sheerness and Channel Islands; No. 9, Gosport; Depot, Leith Fort.	
	Royal Artillery, Welsh Division -	585	409	10	16	23.51	699.1	17.09	27.35	43.61	15.92	22.76	No. 1 Battery, Portsmouth; No. 2, Isle of Wight, Chatham, Lydd, and Portsmouth; No. 6, Pembroke Dock; No. 7, Devonport; No. 8, Devonport; No. 9, Dover; Depot, Newport.	

Brigade or Bat-	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con-stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Time to each Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
ROYAL ARTILLERY—cont.	Royal Artillery, North Irish Division.	370	279	13	8	14.07	764.0	35.13	21.62	40.46	14.77	19.58	No. 2 Battery, Isle of Wight; No. 3, Cork Harbour; No. 6, Sheerness; No. 7, Isle of Wight; No. 8, Portsmouth; Depot, Londonderry.	
	Royal Artillery, South Irish Division.	296	275	4	7	15.90	929.0	13.51	23.65	53.71	19.60	21.10	No. 4 Battery, Sheerness and Woolwich; No. 5, Portsmouth; Depot, Kinsale.	
	Royal Artillery, Regimental District, Staff.	814	317	6	14	26.30	389.4	7.37	17.20	32.31	11.79	30.28	Woollwich.	
	Royal Artillery, Coast Brigade	687	143	9	8	9.40	208.1	13.10	11.64	13.68	4.96	23.99	1st Division, Tynemouth; 2nd, Seaford; 3rd, Channel Islands; 4th, Plymouth; 5th, Edinburgh; 6th, Tower of London; 7th, Folkestone; 8th, Dublin; 9th, Cork; 10th, Gravesend.	
	Royal Artillery, Various Brigades	868	323	2	26	23.11	378.7	2.31	30.02	26.68	9.74	25.72		
	Total Royal Artillery	15,532	12,126	137	352	734.56	780.7	8.82	21.63	47.29	17.26	23.11		
ROYAL ENGINEERS.														
	Royal Engineers	3,174	1,909	16	43	121.57	601.4	5.04	13.55	38.30	13.18	23.24		Various

Brigade or Bat-	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con- stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.	days.	days.		
FOOT GUARDS.														
1st	Grenadier Guards -	806	720	2	15	31·86	883·3	2·46	18·61	39·53	14·43	16·15	Windsor, 8 months; London, 4 months	22
2nd	Grenadier Guards -	654	738	3	23	52·35	1128·4	4·59	33·64	80·04	29·22	25·89	London, 8 months; Dublin, 4 months	4
3rd	Grenadier Guards -	753	854	3	28	59·78	1134·1	3·98	37·18	79·39	28·88	25·55	London, 10½ months - - -	1
1st	Coldstream Guards -	728	612	6	22	46·94	840·6	8·24	30·22	64·48	23·53	27·99	London, 7 months Windsor, 4 months	1
2nd	Coldstream Guards -	678	655	6	15	31·14	968·1	8·85	22·12	45·98	16·76	17·35	London, 12 months - - -	4
1st	Scots Guards -	731	921	3	13	50·69	1259·9	4·10	17·78	69·34	25·31	20·09	Dublin, 8 months; London, 4 months	4
2nd	Scots Guards -	646	746	6	24	52·60	1159·4	9·29	37·15	81·42	29·72	25·68	London, 12 months - - -	1
	Detachments Foot Guards -	539	251	-	-	19·55	465·7	-	-	35·27	13·24	28·43	Aldershot, Curragh, &c. - -	Various
	Total Foot Guards -	5,535	5,500	29	139	344·91	993·7	5·24	25·11	62·31	22·74	22·89		
INFANTRY.														
2nd	Royal Scots - - -	629	628	3	12	23·79	998·4	4·77	19·08	45·77	16·72	16·73	Edinburgh, 1 month; Glasgow, 11 months; Detachment, Blackness Castle.	6
1st	Royal West Surrey Regiments -	684	797	3	17	44·28	1165·2	4·38	24·85	64·71	23·62	20·27	Cork, 5 months; Dublin, 6½ months; Belfast, 1 month.	7
2nd	East Kent Regiment - -	569	443	5	2	23·29	778·5	8·78	3·51	40·93	14·97	19·19	Dublin, 8 months; Detachment at Droyed.	-
1st	Royal Lancaster Regiment -	535	492	2	8	30·04	900·9	3·74	14·95	56·15	20·49	22·75	Aldershot, 7½ months; Buttevant, 4½ months; Detachment at Kinsale.	5

Brigade or Bat-	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con-stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Duration of Sick.	Average Length of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
INFANTRY—cont.														
1st	Northumberland Fusiliers	543	451	3	7	23.74	830.6	5.52	12.89	43.72	15.96	19.21	Dublin, 5 months; Newry, 7 months; Detachments at Belfast, Dundalk, &c.	6
1st	Royal Warwickshire Regiment	531	362	3	7	15.61	623.1	5.16	12.05	26.87	9.80	15.74	Tipperary, 12 months; Detachments, Duncannon Fort and Queenstown.	6
1st	Liverpool Regiment	514	582	3	11	36.09	1132.3	5.83	21.40	70.21	25.63	22.63	Dublin, 12 months; Detachment, Belfast.	8
1st	Norfolk Regiment	441	424	1	2	28.05	961.4	2.27	4.54	63.60	23.28	24.14	Aldershot, 6 months	—
1st	Lincolnshire Regiment	500	740	6	6	41.23	1460.0	12.00	12.00	82.46	30.10	20.34	Curragh, 1 month; Dublin, 11 months	9
1st	Devonshire Regiment	533	532	6	8	30.10	998.2	10.85	14.46	54.43	19.87	19.90	Newry, 5 months; Cork, 7 months; Detachments at Belfast, Dundalk, Queenstown, and Youghal.	9
2nd	Suffolk Regiment	834	570	3	17	31.61	683.4	3.60	20.38	37.90	13.58	20.24	Cork, 8 months; Curragh, 4 months; Detachments at Killybeg, Youghal, &c.	9
1st	Somerset Light Infantry	585	589	8	—	21.45	1023.9	13.67	—	36.67	13.38	13.07	Birr, 94 months; Colchester, 24 months	7
1st	West Yorkshire Regiment	436	443	5	2	24.09	1016.1	11.47	4.59	55.25	20.17	19.85	Galway, 5 months; Dublin, 7 months; Detachments at Castlebar, Gort, and Athlone.	7
1st	Bedfordshire Regiment	680	615	2	31	29.39	976.2	3.17	40.21	46.65	17.03	17.44	Colchester, 94 months; Bradford, 24 months; Detachments, Weedon and Lichfield.	16
1st	Leicestershire Regiment	672	834	3	14	44.59	1241.1	4.64	20.83	66.35	24.23	19.51	Aldershot, 10 months; York, 2 months	4
1st	Royal Irish Regiment	799	852	12	11	56.35	1066.3	15.02	13.77	70.53	25.74	24.14	Devonport, 12 months	1
2nd	Yorkshire Regiment	645	519	1	8	26.29	804.6	1.55	12.40	40.76	14.98	18.49	Buttevant, 7½ months; Aldershot, 4½ months; Detachments, Clare Castle, Killybeg, and Tralee.	10

Brigade or Bat-	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Inval.	Average Con-stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Inval.	Average Consistently Sick.	Average Sick Time to each Soldier.		
INFANTRY—cont.													
1st	Lancashire Fusiliers -	634	592	3	18	33·87	833·7	4·73	28·86	53·42	19·50	20·88 days.	Chatham, 3 months; Manchester, 9 months; Detachments, Ashton, Fleetwood, Weedon.
1st	Royal Scots Fusiliers -	560	298	6	4	13·29	532·1	10·71	7·14	23·73	8·66	16·28	Portland, 7 months; Fermoy, 5 months; Detachment at Cork.
2nd	Royal Welsh Fusiliers -	520	412	2	4	20·90	792·3	3·84	7·66	40·19	14·67	18·51	Fermoy, 12 months; Detachment at Killarney.
1st	South Wales Borderers -	524	394	3	10	27·19	751·9	5·72	10·08	51·89	18·94	25·19	Gurrah, 9 months; Birr, 3 months; Detachments at Belfast, Dublin, and Portlanna.
2nd	King's Own Borderers -	463	397	1	11	20·46	837·4	2·16	23·76	63·63	23·22	27·08	Dublin, 1 month; Aldershot, 6 months
1st	Scottish Rifles -	579	529	7	6	23·48	913·6	12·06	10·86	40·55	14·80	16·20	Glasgow, 1 month; Curragh, 11 months; Detachment at Dublin.
2nd	Royal Inniskilling Fusiliers -	536	475	2	6	33·00	886·2	3·73	11·19	61·57	22·47	25·86	Aldershot, 7½ months -
1st	Gloucestershire Regiment -	583	618	5	12	30·18	1060·0	8·98	20·06	51·77	18·89	17·82	York, 10 months; Preston, 2 months; Detachments, Fleetwood and Stran-sail Camp.
2nd	Worcestershire Regiment -	573	772	3	5	42·63	1347·3	5·24	8·73	74·40	27·16	20·16	Portsmouth, 12 months; Detachments at Marchwood and Hilsen.
2nd	East Lancashire Regiment -	605	452	2	5	18·92	747·1	3·30	8·26	31·27	11·41	15·28	Ennis-Killen, 12 months; Detachments at Belurabet, Londonderry, and Sligo.
2nd	East Surrey Regiment -	641	345	-	12	23·04	538·2	-	18·72	35·94	13·12	24·37	Dover, 12 months; Detachments at Shorncliffe and Lydd.
2nd	Duke of Cornwall's Light Infantry -	368	462	2	3	26·26	1309·8	5·43	8·15	76·79	28·03	21·40	Devonport, 6½ months -
2nd	West Riding Regiment -	589	777	6	10	46·94	1319·2	10·19	16·08	79·09	29·09	22·05	Aldershot, 9 months -

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INFANTRY—cont.														
2nd	Border Regiment	522	541	6	13	36.40	1036.4	11.49	22.99	69.73	days. 25.45	days. 24.56	Dublin, 5 months; Galway, 7 months; Detachments at Athlone, Castlebar, and Gort.	9
1st	Royal Sussex Regiment	820	852	4	9	45.09	1039.0	4.88	10.97	54.99	20.07	19.32	Portsmouth, 11½ months; Aldershot, ¼ month; Detachment at Hilsa.	1
2nd	South Staffordshire Regiment	557	846	3	5	45.25	1513.9	3.59	8.97	81.24	29.68	19.52	Manchester, 3 months; Devonport, 9 months; Detachment at Weedon.	6
1st	Dorsetshire Regiment	424	373	3	—	17.86	879.7	4.72	—	42.12	15.27	17.46	Portland, 4½ months; Detachment at Weymouth.	—
1st	South Lancashire Regiment	560	867	3	17	48.95	1543.2	5.36	30.36	37.41	31.90	20.61	Portsmouth, 11 months	—
2nd	Welsh Regiment	497	733	2	18	46.07	1474.8	4.02	36.23	92.69	33.83	23.94	Dublin, 13 months; Detachments at Mullingar and Belfast.	8
2nd	Royal Highlanders	572	371	2	6	23.09	648.6	3.46	10.40	38.62	14.09	21.73	Curragh, 11½ months; Dublin, ¼ month; Detachments, Belfast and Londonderry.	5
1st	Essex Regiment	593	562	5	16	28.33	947.7	8.43	26.98	47.77	17.44	18.40	Colchester, 13 months; Detachment at Woolwich.	2
1st	Derbyshire Regiment	475	246	—	—	9.55	517.9	—	—	20.10	7.33	14.18	Kilkenny, 12 months; Detachments at Queensstown, Duncannon Fort, Waterford, and Wexford.	8
2nd	Loyal North Lancashire Regiment	519	443	2	13	23.63	833.5	3.85	25.05	45.53	16.62	19.47	Pembroke Dock, 12 months	3
1st	Northamptonshire Regiment	603	521	7	8	26.61	864.0	11.61	13.27	44.13	16.11	18.64	Preston, 10 months; Aldershot, 2 months; Detachments, Fleetwood and Isle of Man.	6
2nd	Royal Berkshire Regiment	664	309	4	—	13.04	465.4	6.02	—	19.64	7.17	15.40	Athlone, 12 months; Detachments at Boyle, Dublin, and Longford.	5
2nd	Royal West Kent Regiment	626	623	5	24	34.92	995.2	7.98	38.33	55.78	20.36	20.45	Chatham, 12 months	4
2nd	Shropshire Light Infantry	633	563	6	15	35.50	897.3	9.48	23.70	56.08	20.47	22.61	Woolwich, 9 months; Curragh, 3 months.	5

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							Admitted.	Died.	Invalided.	Average Constancy Sick.				
INFANTRY—cont.														
1st	Middlesex Regiment -	573	400	2	4	23.96	698.1	3.49	6.98	41.81	15.26	21.96	Dover, 4 months; Aldershot, 8 months	7
1st	King's Royal Rifle Corps -	721	310	—	6	17.49	429.9	—	8.32	24.26	8.85	20.69	Kinsale, 8 months; Parkhurst, 4 months; Detachments at Queens-town and Marchwood.	10
2nd	King's Royal Rifle Corps -	616	548	—	11	38.66	889.6	—	17.86	63.76	22.91	25.75	Devonport, 54 months; Shorncliffe, 64 months.	5
1st	Wiltshire Regiment -	467	323	2	1	20.06	691.6	4.28	2.14	42.95	15.68	22.67	Jersey, 12 months - - -	4
1st	Manchester Regiment -	559	566	2	14	38.95	1012.5	3.68	25.64	69.68	25.43	25.12	Shorncliffe, 94 months; Aldershot, 24 months.	4
1st	York and Lancaster Regiment -	480	535	5	9	23.13	1114.6	8.33	18.75	58.60	21.39	19.19	Sheffield, 12 months; Detachments, Tynemouth Castle and Strensall Camp.	2
1st	Highland Light Infantry -	613	507	4	21	27.70	827.1	6.52	34.25	45.18	16.49	19.94	Belfast, 12 months; Detachments at Downpatrick and Newtownards.	6
1st	Seaforth Highlanders -	577	477	3	5	23.95	826.7	5.20	8.66	41.51	15.15	18.33	Aldershot, 1 month; Edinburgh, 11 months; Detachments, Hamilton, Stirling, and Blackness.	4
2nd	Gordon Highlanders -	582	372	6	2	20.29	639.2	10.31	3.44	34.86	12.72	19.91	Guernsey, 12 months; Detachment at Alderney.	5
1st	Royal Irish Rifles -	649	693	2	8	44.03	1067.8	3.03	12.33	67.84	24.76	23.19	Gosport, 12 months; Detachment at Fort Fareham.	5
2nd	Royal Irish Fusiliers -	503	467	4	16	29.06	988.1	7.95	31.61	57.77	21.09	21.34	Portsmouth, 1 month; Aldershot, 11 months.	2
2nd	Connaught Rangers -	581	306	6	1	13.59	530.1	10.32	1.72	23.39	8.53	16.10	Templemore, 12 months; Detachments at Butevant and Waterford.	4
2nd	Argyll and Sutherland Highlanders	597	553	2	5	29.88	926.3	3.35	8.37	50.05	18.27	19.73	Parkhurst, 8 months; Cork, 4 months; Detachments, Marchwood and Youghal.	5
2nd	Leinster Regiment -	691	515	6	6	25.60	745.3	8.68	8.68	37.04	13.52	18.14	Fernoy, 34 months; Limerick, 24 months; Detachments, Clare Castle and Tralee.	9

Brigade or Bat- talion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Casualty Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Consistently Sick.	days.	days.		
	INFANTRY—cont.													
1st	Royal Munster Fusiliers	519	451	6	8	23.71	830.4	11.56	15.41	45.68	16.67	20.08	Dover, 12 months; Detachment at Lydd.	3
1st	Royal Dublin Fusiliers	576	570	1	3	24.50	989.6	1.73	5.21	42.53	15.52	15.60	Mullingar, 8 months; Curragh, 1½ months; Detachments at Dublin.	—
2nd	Rifle Brigade	651	674	4	5	34.60	1035.3	6.14	7.68	53.29	19.45	19.78	Aldershot, 9 months; Woolwich, 3 months.	6
3rd	Rifle Brigade	570	584	3	5	11.72	588.0	5.26	8.77	20.56	7.50	12.81	Warley, 6½ months; Detachments at Colchester and Woolwich.	—
	Other Infantry	1,762	1,391	1	60	121.52	789.4	.57	39.16	68.97	25.17	31.89	.	Various
	Total	37,677	34,395	220	611	1386.91	910.2	5.84	16.23	51.41	18.76	20.61	.	
	REGIMENTAL DEPÔTS.													
Depôt.	Royal Scots Regiment	185	53	—	1	3.64	313.5	—	5.41	19.63	7.13	22.91	Glencorse	Since formation.
"	Royal West Surrey Regiment	130	98	2	—	3.23	753.3	15.38	—	24.86	9.07	12.03	Guildford	"
"	East Kent Regiment	221	262	4	10	17.26	1185.5	18.10	45.24	78.10	28.50	24.04	Canterbury	"
"	Royal Lancaster Regiment	149	103	3	—	2.12	691.3	20.13	—	14.23	5.19	7.51	Lancaster	"
"	Northumberland Fusiliers	212	186	3	5	9.29	877.4	14.15	23.58	43.63	15.99	18.26	Newcastle-on-Tyne	"
"	Royal Warwickshire Regiment	134	95	1	7	3.82	709.0	7.46	52.24	28.51	10.33	14.57	Warwick	"
"	Royal Fusiliers	565	454	4	5	16.62	768.1	7.08	8.85	29.41	10.74	13.98	Hounslow	"
"	Middlesex Regiment													"

Battalion or Bat-	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Sick.	Ratio per 1,000 of Mean Strength.				Average Time to Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
REGIMENTAL DEPOTS—cont.														
Depôt.	Liverpool Regiment -	152	68	2	3	3.23	417.4	13.16	19.74	21.25	7.76	17.31	Warrington	-
"	Norfolk Regiment	186	211	4	11	6.32	1134.4	21.51	59.14	33.98	12.40	10.93	Yarmouth	-
"	Lincolnshire Regiment	110	85	1	1	4.22	772.7	9.09	9.09	38.36	14.00	18.12	Lincoln	-
"	Devonshire Regiment	119	110	5	1	3.52	924.4	42.01	8.40	29.59	10.80	11.08	Exeter	-
"	Suffolk Regiment -	146	191	-	-	5.62	1308.2	-	-	38.49	14.05	10.73	Bury St. Edmunds	-
"	Somersetshire Light Infantry	142	73	1	1	3.55	514.1	7.04	7.04	25.00	9.13	17.75	Taunton	-
"	West Yorkshire Regiment	171	120	3	4	6.06	701.7	17.54	23.39	35.38	12.91	18.40	York	-
"	East Yorkshire Regiment	351	250	1	6	13.29	712.2	2.85	17.00	37.86	13.82	19.40	Beverley	-
"	Bedfordshire Regiment	141	130	-	-	3.30	922.0	-	-	23.40	8.54	9.26	Bedford	-
"	Leicestershire Regiment	157	84	2	1	4.49	535.0	12.74	6.37	28.60	10.44	10.51	Leicester	-
"	Royal Irish Regiment	232	159	4	3	7.86	685.4	17.24	12.93	33.87	12.36	18.04	Clonmel	-
"	Yorkshire Regiment -	159	36	-	2	2.11	236.4	-	12.53	13.27	4.84	21.39	Richmond (Yorks)	-
"	Lancashire Fusiliers -	142	86	1	2	3.81	605.6	7.04	14.08	26.83	9.79	16.17	Bury (Lanc.)	-
"	Royal Scots Fusiliers -	206	153	-	1	5.67	742.7	-	4.85	27.52	10.05	13.53	Ayr	-
"	Cheshire Regiment -	369	297	4	6	10.29	804.9	10.84	16.26	27.80	10.18	12.65	Chester	-
"	Royal Welsh Fusiliers	179	200	2	8	8.50	1117.3	11.17	44.69	47.48	17.33	15.51	Wrexham -	-

Brigade or Bat- talion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Annually Sick.	Ratio per 1,000 of Mean Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.	
							Admitted.	Died.	Invalided.	Average Constantly Sick.					
REGIMENTAL DEPÔTS—cont.															
Depôt	South Wales Borderers	142	134	—	—	3·37	943·6	—	—	23·73	8·66	9·18	Brecon	—	Since formation.
"	King's Own Scottish Borderers	156	147	1	6	6·40	942·3	6·41	38·46	41·02	14·97	15·89	Berwick-on-Tweed	—	"
"	Scottish Rifles	141	74	—	1	2·13	524·8	—	7·09	15·11	5·51	10·51	Hamilton	—	"
"	Royal Inniskilling Fusiliers	196	173	5	5	4·04	833·6	23·51	25·51	20·41	7·52	8·52	Omagh	—	"
"	Gloucestershire Regiment	211	186	2	1	9·00	831·5	9·48	4·74	42·05	15·57	17·66	Bristol	—	"
"	Worcestershire Regiment	140	125	1	1	4·37	838·9	6·71	6·71	29·33	10·71	12·76	Worcester	—	"
"	East Lancashire Regiment	122	84	2	1	5·05	688·5	16·40	8·20	41·39	15·11	21·94	Burnley	—	"
"	East Surrey Regiment	180	89	1	1	3·93	494·4	5·55	5·55	21·83	7·97	16·12	Kingston-on-Thames	—	"
"	Duke of Cornwall's Light Infantry	180	153	1	3	5·20	877·8	5·56	16·67	23·89	10·54	12·58	Bodmin	—	"
"	West Riding Regiment	120	101	4	3	5·67	841·7	33·33	25·00	47·25	17·25	20·49	Halifax	—	"
"	Border Regiment	149	109	3	—	4·07	731·5	20·13	—	27·31	9·97	13·63	Carlisle	—	"
"	Royal Sussex Regiment	174	187	2	3	4·64	1074·7	11·49	17·24	23·66	9·73	9·05	Chichester	—	"
"	Hampshire Regiment	558	373	4	7	16·05	668·4	7·17	12·54	23·76	10·50	13·71	Winchester	—	"
"	South Staffordshire Regiment	186	82	2	—	3·01	440·0	10·75	—	16·18	5·91	13·40	Lichfield	—	"
"	Dorsetshire Regiment	340	203	2	2	9·56	597·0	5·88	5·88	23·12	10·26	17·19	Dorchester	—	"
"	South Lancashire Regiment	165	62	2	4	3·38	375·8	12·12	24·24	20·48	7·43	21·51	Warrington	—	"
"	Welsh Regiment	113	95	1	1	3·38	840·7	8·84	8·84	29·91	10·92	12·99	Cardiff	—	"

Brigade or Bat- lion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con- sistency Sick.	Ratio per 1,000 of Mean Strength.				Average to each Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Consistency Sick.	days.	days.		
	REGIMENTAL DEPOTS— <i>cont.</i>													
Depôt.	Royal Highlanders -	142	77	—	1	2.88	542.2	—	7.04	20.28	7.40	13.05	Perth -	—
"	Oxfordshire Light Infantry -	492	306	4	9	24.00	804.9	8.13	18.29	48.78	17.80	22.12	Oxford; Detachments at Parkhurst and Shorncliffe.	—
"	Essex Regiment -	188	137	—	1	6.78	728.7	—	5.62	36.06	13.16	18.06	Warley -	—
"	Derbyshire Regiment -	132	69	2	—	3.63	522.7	15.15	—	27.50	10.04	19.20	Derby -	—
"	Loyal North Lancashire Regiment -	122	64	2	—	2.52	524.6	16.40	—	20.66	7.54	14.37	Preston -	—
"	Northamptonshire Regiment -	184	214	1	8	6.52	1163.0	5.43	43.48	35.45	12.93	11.12	Northampton -	—
"	Royal Berkshire Regiment -	131	109	4	—	3.55	832.1	30.53	—	27.10	9.89	11.89	Reading -	—
"	Royal West Kent Regiment -	168	105	—	1	4.77	625.0	—	5.95	28.39	10.85	16.58	Maidstone -	—
"	Yorkshire Light Infantry -	445	317	—	4	14.45	712.3	—	9.00	32.47	11.85	16.64	Pontefract -	—
"	Shropshire Light Infantry -	175	53	1	1	2.63	302.9	5.71	5.71	15.03	5.48	18.11	Shrewsbury -	—
"	Wiltshire Regiment -	123	128	1	—	3.96	1040.6	8.13	—	32.20	11.75	11.29	Devizes -	—
"	Manchester Regiment -	127	204	—	5	6.98	1696.3	—	39.37	54.96	20.06	12.49	Ashton-under-Lyno -	—
"	North Staffordshire Regiment -	462	322	4	6	12.03	697.0	8.66	13.00	26.04	9.50	13.64	Lichfield -	—
"	York and Lancaster Regiment -	133	95	1	2	4.56	714.3	7.52	15.04	35.04	12.51	17.52	Pontefract -	—
"	Durham Light Infantry -	346	346	2	16	14.82	1011.6	5.80	46.38	42.95	15.69	14.65	Newcastle -	—
"	Highland Light Infantry -	133	75	—	1	2.22	568.2	—	7.58	16.82	6.14	10.80	Hamilton -	—
"	Seaforth Highlanders -	126	49	1	1	2.70	388.9	7.93	7.93	21.45	7.63	20.11	Fort George -	—

Brigade or Bat- talion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Con- stantly Sick.	Ratio per 1,000 of Mean Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.	
							Admitted.	Died.	Invalided.	Average Constancy Sick.					
REGIMENTAL DEPÔTS—cont.															
Depôt	Gordon Highlanders -	121	77	2	—	2'48	638'4	8'26	—	20'49	7'46	11'75	Aberdeen -	-	Since formation.
"	Queen's Own Cameron Highlanders	266	139	1	2	7'99	522'6	3'76	7'52	30'04	10'96	20'98	Inverness -	-	"
"	Royal Irish Rifles -	141	57	2	3	3'21	404'2	14'18	21'27	22'76	8'31	20'56	Belfast -	-	"
"	Royal Irish Fusiliers -	205	57	1	3	2'36	278'0	4'88	14'63	11'51	4'20	15'11	Armagh -	-	"
"	Connaught Rangers -	181	72	2	—	2'63	397'8	11'05	—	14'53	5'25	13'33	Galway -	-	"
"	Argyll and Sutherland Highlanders	152	56	1	1	2'67	368'4	6'58	6'58	17'56	6'41	17'40	Stirling -	-	"
"	King's Royal Rifle Corps and Rifle Brigade.	522	604	2	6	23'65	1157'1	3'83	11'50	45'31	16'54	14'29	Winchester	-	"
"	Leinster Regiment -	152	133	6	—	3'62	875'0	39'46	—	23'82	8'69	9'93	Birr -	-	"
"	Royal Munster Fusiliers -	134	145	1	2	4'38	1062'4	7'46	14'92	32'68	11'93	11'02	Tralee -	-	"
"	Royal Dublin Fusiliers -	191	158	1	—	7'32	827'2	5'24	—	38'32	13'99	16'91	Naas -	-	"
"	Detached -	60	40	—	6	1'49	666'7	—	100'00	24'83	9'06	13'59		-	"
		13,592	10,172	122	196	421'86	748'4	8'97	14'42	31'04	11'33	15'14		-	
DEPARTMENTAL CORPS, &c.															
	Commissariat and Transport Corps -	2,319	2,033	26	25	123'46	876'7	11'21	10'78	53'25	19'43	22'17		-	
	Ordnance Store Corps -	206	147	3	—	6'90	713'6	14'56	33'49	—	12'22	17'13		-	

Brigade or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Amount of Sick.	Ratio per 1,000 of Mean Strength.				Average Time to Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	DEPARTMENTAL CORPS, &c.													
	-cont.													
	Medical Staff Corps . . .	1,252	969	13	15	52.65	773.9	10.38	11.98	42.05	15.35	19.83		
	Garrison Staff and Departments . .	1,920	735	10	24	53.19	883.8	5.21	12.50	27.18	9.92	25.92		
	Total Departmental Corps . . .	5,697	3,894	53	64	235.22	681.8	9.13	11.23	41.29	15.07	22.10		

ABSTRACT No. XLII.—Table, taken from the Reports of the Principal Medical Officers, showing the various Corps which served in the different Foreign Commands during the Year 1886, and some of the most important of their Health Statistics.

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.		Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.	
				In the Command.	Of Invalids.			Total.	Admitted.	Died.	Invalided.					Constantly Sick.
GIBRALTAR.																
	Royal Artillery -	873	505	4	1	5	26.70	17	578.4	5.72	19.47	30.58	11.16	19.30	Gibraltar, 12 months.	Various.
	Royal Engineers -	297	210	4	1	5	18.10	20	777.7	16.84	67.34	69.46	23.24	31.46	Gibraltar, 12 months.	"
1st	Norfolk Regiment -	374	338	-	-	-	18.52	1	906.4	-	2.67	49.52	18.07	19.94	Gibraltar, 6 months. To England, 28 June 1886.	1
1st	East Yorkshire Regiment -	701	629	5	1	6	33.40	12	897.2	8.56	17.10	47.64	17.39	19.38	Gibraltar, 10½ months. To West India, 13 November 1886.	1
1st	Cheshire Regiment -	94	69	-	-	-	4.21	1	734.0	-	10.64	44.79	16.36	22.27	Gibraltar, 1 month. To Egypt, 8 February 1886.	1
2nd	King's Own Borderers -	234	297	1	-	1	16.39	2	1249.2	4.27	8.55	70.05	22.57	20.14	Gibraltar, 4½ months. To England, 16 June 1886.	-
1st	South Staffordshire Regiment -	332	424	8	1	9	23.80	30	1277.1	27.11	90.36	87.05	31.66	24.79	Gibraltar, 6 months. From Egypt, 28 June 1886.	1
1st	Royal West Kent Regiment -	363	318	4	-	4	21.45	23	876.0	11.02	63.36	59.09	21.57	24.63	Gibraltar, 6 months. From Egypt, 16 June 1886.	1
3rd	King's Royal Rifles -	429	390	2	-	2	18.33	3	909.0	4.66	6.99	42.73	13.60	17.15	Gibraltar, 6½ months. From Egypt and Cyprus, 11 June 1886.	1
2nd	Royal Irish Rifles -	97	64	1	-	1	3.94	-	639.7	10.31	-	40.62	14.53	22.47	Gibraltar, 1½ months. From Halifax, 9 November 1886.	1
3rd	Rifle Brigade -	369	392	5	-	5	16.54	-	818.4	13.55	-	44.62	16.54	19.99	Gibraltar, 5½ months. To England, 11 June 1886.	1
	Other Corps -	1	-	-	1	1	-	-	-	-	-	-	-	-	Gibraltar	-
Det.	Staff and Departments -	143	57	2	-	2	5.00	7	608.3	14.00	46.96	34.97	13.76	20.98	Gibraltar, 12 months -	Various.

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Num-ber Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Com-pleted Years of Service in Foreign Com-mands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
MALTA.																
2nd Dragoons	-	-	-	-	-	-	1	10	-	-	-	-	days.	days.	Cottonera, 2 months. From England, 2 November 1886.	-
Royal Artillery, Northern Division.	23	22	1	-	-	1	-	1.67	966.5	43.46	-	72.61	26.50	27.70	Cottonera, 2 months. From England, 2 November 1886.	-
Royal Artillery, Western Division.	20	13	-	-	-	-	-	.63	650.0	-	-	31.50	11.49	17.68	Cottonera, 2 months. From England, 2 November 1886.	-
Royal Artillery, London Division.	251	109	-	-	-	-	4	6.74	431.2	-	-	13.93	26.85	22.56	Cottonera and Valetta, 11½ months, To England, 16 November 1886.	5
Royal Artillery, Cinque Ports Division.	120	79	-	-	-	-	4	4.41	658.3	-	-	33.33	36.75	20.37	Cottonera, 11 months; Valetta, 1 month.	1
Royal Artillery, South Irish Division.	362	237	1	1	2	2	6	16.41	673.3	5.03	17.04	43.77	15.97	23.73	Valetta, 12 months	4
Royal Artillery, North Irish Division.	132	142	-	-	-	-	5	8.77	1075.7	-	37.88	66.44	24.19	28.38	Valetta, 12 months	1
Royal Engineers	-	88	1	-	-	1	1	5.73	663.6	7.57	7.57	43.33	15.81	23.72	Valetta, 12 months	5
1st Duke of Cornwall's Light Infantry.	813	635	7	-	7	7	3	46.39	851.8	8.60	3.69	57.06	20.82	24.36	Cottonera, 12 months. Detachment at Pembroke Camp.	2
1st Royal Highlanders	-	523	303	2	-	2	3	18.70	579.3	3.82	5.73	35.75	13.06	22.52	Cottonera, 8 months. From Egypt, 6 May 1886.	-
1st Berkshire Regiment	-	89	-	-	-	-	-	4.45	542.6	-	-	27.13	9.90	18.25	Pembroke Camp, 7 months. From Egypt, 25 May 1886.	-
1st Gordon Highlanders	-	414	1	4	5	5	10	26.61	513.3	6.66	13.12	34.79	12.69	23.37	Valetta, 12 months. Detachment at Pembroke Camp.	1
2nd South Yorkshire Regiment	-	924	10	1	11	11	20	59.06	897.0	10.67	19.41	57.92	21.14	23.56	Valetta, 12 months. Detachments at Gozo and Pembroke Camp.	2
2nd Royal Inniskilling Fusiliers	-	201	1	1	1	2	5	8.98	909.5	9.04	22.62	40.63	14.83	16.30	Cottonera, 4 months. To England, 6 May 1886.	-
Other Corps	-	44	1	1	1	2	11	7.30	745.7	33.88	186.44	123.72	45.16	60.55	Various stations	1
Medical Staff Corps	-	66	-	-	-	-	3	6.06	673.4	-	30.61	51.63	18.80	27.92	-	Various
Garrison Staff and Departments.	-	36	9	1	-	1	1	.33	250.0	27.77	27.77	.91	3.84	13.38	-	

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
Cyprus.	Royal Engineers	4	6	—	—	—	—	35	1500.0	—	—	87.50	31.94	21.20	Polymedia and Troodos, 12 months -	4
	1st Berkshire Regiment	188	222	—	—	—	2	9.10	1180.8	—	10.64	48.40	17.72	15.01	Polymedia and Troodos, 6 months. From Egypt, 2 June 1886.	—
	3rd King's Royal Rifles	182	162	—	—	—	1	7.65	890.1	—	5.49	42.03	15.34	17.23	Polymedia, 5 months. Detachment at Nicosia. To Gibraltar, 2 June 1886.	2
	Other Corps	217	290	7	—	7	2	13.66	1198.1	32.26	9.21	62.49	22.80	19.03	Mount Troodos and Nicosia -	—
	Garrison Staff and Departments.	45	32	—	—	—	2	1.66	711.1	—	44.44	36.89	13.46	18.93	Various stations	8
CANADA.																
5/1	Royal Artillery, Cinque Ports Division.	105	72	—	—	—	—	3.32	685.7	—	—	31.61	11.64	16.83	Halifax, 12 months	2
5/1	Royal Artillery, Northern Division.	104	56	—	—	—	4	3.17	538.4	—	38.46	30.48	11.12	20.66	Halifax, 12 months	1
6/1	Royal Artillery, Northern Division.	117	56	—	—	—	4	3.24	478.0	—	34.18	27.69	10.10	21.11	Halifax, 12 months	1
	Royal Engineers	120	46	—	—	—	2	1.98	400.0	—	16.66	16.50	6.00	15.00	Halifax, 12 months	Various
2nd	Royal Irish Rifles	637	377	2	—	2	12	21.19	591.8	3.13	18.83	33.26	12.00	20.61	Halifax, 10 months. To Gibraltar, 29 October 1886.	3
2nd	York and Lancaster Regiment	158	134	1	—	1	—	5.55	848.1	6.32	—	35.12	12.80	15.11	Halifax, 2 months. From Bermuda, 27 October 1886.	—
	Garrison Staff and Departments.	42	8	—	—	—	1	3.32	190.4	—	23.80	7.61	2.70	14.60	Halifax, 12 months	Various

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Num-ber Constantly Sick.	Ratio per 1,000 of Strength.			Average Sick Time to each Soldier.	Average Dur-ation of Sickness.	Stations occupied during the Year.	Com-pleted Years of Service in Foreign Com-mands.	
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.					Constantly Sick.
BERMUDA.																
2/1 & 3/1	Royal Artillery, North Irish Division.	94	40	—	—	—	—	2'08	425'7	—	—	22'13	8'08	18'98	St. George's, 2½ months. From England, 21 October 1886.	—
7/1 & 8/1	Royal Artillery, North Irish Division.	135	71	5	—	5	6	3'85	525'9	37'04	44'44	28'62	10'41	19'79	St. George's, 10 months. Detach-ment at Watford. To England, 21 October 1886.	1
2nd	Royal Engineers	142	97	2	—	2	2	4'64	683'1	14'08	14'08	32'68	11'93	17'46	Prospect, St. George's, and Watford, 12 months.	3
	West Riding Regiment	121	174	1	—	1	10	8'45	1483'0	8'26	—	69'83	25'49	17'72	Prospect, 1 month. Detachment at St. George's and Watford. From England, 21 October 1886.	—
2nd	York and Lancaster Regiment	654	366	6	—	6	—	21'42	559'6	9'17	15'29	32'75	11'95	21'36	Prospect, 10 months. Detachments at St. George's and Watford. To Halifax, N.S., 21 October 1886.	3
Garrison Staff and Depart-ments.		81	53	1	—	1	2	1'86	407'4	12'37	24'69	22'96	8'38	20'57	Prospect, St. George's, and Watford -	Various
WEST INDIES.																
6/1	Royal Artillery, London Divi-sion.	115	130	2	—	2	1	5'99	1150'4	17'39	8'69	5'21	18'91	16'74	Barbados and Trinidad, 12 months	1
3/1	Royal Artillery, Welsh Divi-sion.	101	147	3	—	3	2	7'12	1455'4	29'70	19'80	7'05	25'73	25'70	Newcastle, Up Park Camp, and Port Royal, 12 months. Detach-ment at Nassau.	1
Royal Artillery, Coast Brigade		2	—	—	—	—	—	—	—	—	—	—	—	—	Jamaica, 12 months	Various
		13	9	1	—	1	—	4'40	692'3	76'09	—	3'07	11'23	16'22	Various stations	"
1st	Royal Engineers	—	76	—	—	—	—	1'64	767'6	—	—	16'56	6'46	7'88	Barbados, 3 weeks. Detachments at Trinidad, Newcastle, Up Park Camp. From Gibraltar, 7 Decem-ber 1886.	"

Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalide sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.
				In the Command.	Of Invalide.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
	WEST INDIES—cont.												days.	days.		
1st	North Staffordshire Regiment	637	794	7	—	7	10	40.09	1240.4	10.99	15.70	61.36	22.97	18.43	Barbados, 11 months. Detachments at Trinidad, Newcastle, Up Park Camp. To Natal, 8 December 1886.	2
	West India Regiments	13	22	1	—	1	1	.41	1032.3	92.31	92.31	3.16	11.51	6.80	Up Park Camp, 9½ months. Detachments at Barbados, Nassau, From Sierra Leone, 10 March 1886.	Various
	Garrison Staff and Departments.	40	14	1	—	1	—	.54	350.0	25.00	—	1.35	4.92	13.69	Various stations	"
	CAPE OF GOOD HOPE AND ST. HELENA.															
6th	Dragoons	473	245	3	—	3	5	14.06	517.9	6.34	10.57	22.73	10.85	20.96	Pietermaritzburg, 7½ months; Pine-town, 4 months.	5
1/1	Royal Artillery, South Irish Division.	167	153	—	—	—	2	8.07	916.1	—	11.98	43.32	17.64	19.25	Cape Town, 12 months. Detachments at Wynberg and Simonstown.	2
7/1	Royal Artillery, Western Division.	107	41	2	—	2	—	1.67	383.1	18.69	—	15.61	5.70	14.87	St. Helena, 12 months	7
8/1	Royal Artillery, Western Division.	126	115	1	—	1	1	6.10	912.7	7.94	7.94	43.41	17.67	19.36	Cape Town, 12 months. Detachment at Wynberg.	3
A/4	Royal Artillery	160	91	—	1	1	5	5.82	568.7	6.25	31.25	36.37	13.23	23.34	Pietermaritzburg, 12 months. Detachment at Elshowe.	2
	Royal Engineers	90	41	—	—	—	—	1.36	455.5	—	—	15.11	5.92	12.11	—	Various
1st	Royal Scots	1,071	1,067	3	—	3	18	75.94	996.2	2.80	16.81	69.04	15.20	25.29	Cape Town, 12 months. Detachments at Rorke's Drift, Pietermaritzburg, Wynberg and St. Helena.	2
2nd	South Lancashire Regiment	832	822	4	—	4	25	53.23	987.9	4.51	30.05	63.98	23.35	23.64	Pietermaritzburg, 12 months. Detachments at Elshowe and Rorke's Drift.	2

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
CAPE OF GOOD HOPE AND ST. HELENA—cont.																
1st	Royal Inniskilling Fusiliers -	505	327	3	—	3	4	14·71	647·5	5·94	7·92	29·13	10·63	16·42	2	Etshowe, 12 months. Detachments at Durban, Simonstown, Pietermaritzburg, and Pinetown. Pietermaritzburg, 4 months. Detachment at Rorke's Drift. To Egypt, 9 May 1886. Various stations - - -
1st	Welsh Regiment -	269	244	—	—	—	6	12·21	907·0	—	22·30	45·39	16·57	18·26	5	
	Garrison Staff and Departments.	171	65	—	—	—	7	8·78	380·1	—	40·94	22·11	8·07	21·23	Various	
MAURITIUS.																
9/1	Royal Artillery, Western Division.	100	173	3	—	3	3	7·99	1730·0	30·00	30·00	79·90	29·16	16·86	3	Port Louis, 12 months. Detachment, Curepipe. Port Louis and Curepipe, 12 months Port Louis and Curepipe - -
Dt.	Royal Inniskilling Fusiliers -	284	411	6	—	6	13	22·75	1447·1	21·13	45·77	80·11	29·24	20·20	1	
1st	Garrison Staff and Departments.	30	13	—	—	—	—	·64	433·3	—	—	21·33	7·99	17·97	Various	
CEYLON																
6/1	Royal Artillery, Eastern Division.	9	15	—	—	—	—	·81	1686·6	—	—	90·00	32·85	19·71	8	Colombo, 1 month. To Singapore, 28th January 1886. Trincomalee, 11 months. From Hong Kong, 28th January 1886. Colombo, 11 months. Detachment at Point de Galle. From Singapore, 28th January 1886. Colombo, 12 months. Detachment, Kandy and Point de Galle. Various stations - -
8/1	Royal Artillery, Southern Division.	101	77	2	—	2	1	3·68	763·4	19·50	9·90	35·45	12·94	16·97	—	
9/1	Royal Artillery, Southern Division.	95	94	3	—	3	3	4·27	989·5	31·68	31·58	44·95	10·55	16·68	—	
1st	Argyll and Sutherland Highlanders, Garrison Staff and Departments.	717	873	5	—	5	8	48·82	1217·6	6·97	11·16	67·67	24·70	20·29	1	Various stations - -
		27	20	—	—	—	2	1·37	740·7	—	—	74·07	4·82	6·51	Various	

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospitals.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
CHINA AND STRAITS SETTLEMENTS.																
1/1	Royal Artillery, Lancashire Division.	107	98	2	—	2	—	4.17	915.8	18.69	—	38.97	14.22	15.53	Hong Kong, 12 months	2
5/1	Royal Artillery, Eastern Division.	112	142	1	—	1	1	7.67	1267.8	8.93	8.93	68.48	25.00	19.71	Hong Kong, 12 months	1
6/1	Royal Artillery, Eastern Division.	102	95	3	—	3	1	5.77	931.3	29.41	9.80	56.57	20.65	22.17	Port Canning, 11 months. From Ceylon, 6th February 1886.	10
2/1	Royal Artillery, Southern Division.	105	67	2	1	3	2	4.55	638.0	28.57	19.05	43.33	15.82	24.78	Port Canning, 12 months	1
8/1	Royal Artillery, Southern Division.	5	4	—	—	—	1	.24	800.0	—	200.00	48.00	17.52	21.90	Hong Kong, 16 days. To Ceylon, 16th January 1886.	9
9/1	Royal Artillery, Southern Division.	6	4	—	—	—	1	.02	666.6	—	166.66	3.33	1.21	1.83	Port Canning, 4 months. To Ceylon, 20th January 1886.	9
	Royal Engineers	94	37	1	—	1	1	1.70	303.6	10.64	10.64	18.09	6.60	16.77	Various stations	Various
1st	East Kent Regiment	886	1181	12	—	12	2	42.79	1276.5	13.55	2.23	49.30	17.63	13.81	Tangin, 12 months. Detachments, Port Canning, Penang.	1
2nd	Northamptonshire Regiment	802	1069	3	—	3	13	44.68	1332.9	3.74	16.21	55.71	20.33	15.26	Hong Kong, 12 months	1
	Garrison Staff and Departments.	50	18	1	—	1	—	.53	360.0	20.00	—	10.60	3.87	10.75	Various stations	Various
EGYPT.																
2nd	Dragoons	—	1	—	—	—	—	.05	—	—	—	—	—	18.25	—	1
17th	Lancers	—	1	—	—	—	—	.12	—	—	—	—	—	43.80	—	—
19th	Hussars	193	289	—	—	—	16	15.59	1492.2	—	82.90	80.78	28.96	19.67	Abbassieh, 5 months. To England, 20 May 1886.	3
20th	Hussars	466	557	20	1	21	47	31.93	1195.3	45.05	100.85	68.52	25.01	20.92	Assuan, 12 months. Detachments at Akasheh, Wady Halfa, Korosko, &c.	1

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.	
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.					
EGYPT—cont.																	
F/B	Royal Horse Artillery -	131	210	2	—	2	15	12.79	1603.0	15.27	114.50	97.03	35.63	22.23	days.	Abhassieh, 11½ months. From England, 15 January 1886.	—
G/B	Royal Horse Artillery -	8	14	1	—	1	2	.88	1750.0	125.00	250.00	110.00	40.15	22.94	Abhassieh, 14 days. Left for India, 14 January 1886.	3	
I/B	Royal Horse Artillery -	—	3	—	—	—	—	.39	—	—	—	—	—	47.45	—	—	
G/2	Royal Artillery -	—	—	—	—	—	—	.01	—	—	—	—	—	—	—	—	
K/2	Royal Artillery -	—	1	—	—	—	—	.06	—	—	—	—	—	18.25	—	—	
I/4	Royal Artillery -	—	3	—	—	—	1	.09	—	—	—	—	—	10.96	—	—	
3/1	Royal Artillery, Northern Division.	147	232	4	—	4	8	10.74	1578.2	27.21	54.42	73.06	26.66	16.89	Abhassieh, 7½ months. Cairo, 3½ months. From Gibraltar, 8 January 1886.	—	
1/1	Royal Artillery, Southern Division.	114	90	4	—	4	3	8.03	789.5	35.06	26.31	70.43	25.71	32.56	Ramleh, 12 months - - -	1	
5/1	Royal Artillery, Scottish Division.	63	72	1	—	1	6	4.53	1358.5	18.87	113.20	85.47	31.19	22.96	Abhassieh, 4½ months. To Aden, 18 May 1886.	4	
6/1	Royal Artillery, Scottish Division.	116	89	1	—	1	3	6.23	767.2	8.62	25.86	53.70	19.60	25.55	Suakin, 4½ months. Cairo, 7½ months.	2	
9/1	Royal Artillery, North Irish Division.	91	65	4	—	4	7	5.82	714.3	45.96	76.92	63.95	23.34	32.68	Frontier Field Force, 12 months -	1	
2/1	Royal Artillery, South Irish Division.	124	169	16	—	16	29	11.65	1303.0	129.03	253.87	83.95	34.29	25.16	Frontier Field Force, 12 months -	1	
	Royal Engineers -	398	472	15	—	15	20	22.63	1185.9	37.67	50.25	56.86	20.75	17.49	Cairo, Ramleh, &c., &c.	4	
1st	Scots Guards -	—	1	—	—	—	—	.06	—	—	—	—	—	21.90	—	1	
2nd	East Kent Regiment -	169	235	12	—	12	27	13.24	1478.0	75.47	160.61	83.27	30.39	30.56	Assuan, 2 months; Ramleh, ½ month. To England, 15 March 1886.	—	
1st	Royal Fusiliers -	804	826	12	—	12	38	46.35	1027.3	14.92	47.26	56.41	20.68	20.04	Cairo and Abhassieh, 12 months -	1	

Brigade or Bat- talion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Num- ber Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Dura- tion of Sickness.	Stations occupied during the Year.	Com- pleted Years of Service in Foreign Com- mands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
EGYPT—cont.																
1st	Yorkshire Regiment	-	740	1,041	48	-	48	60.85	1406.7	64.86	70.27	82.23	30.01	21.33	Frontier Field Force; Detachment, Nile Reserve, 12 months.	2
1st	Cheeshire Regiment	-	712	983	8	-	8	54.55	1379.2	11.24	82.72	76.61	27.96	20.27	Cairo, 10 months. Abbassiyeh. From Gibraltar, 8 February 1886.	4
2nd	Duke of Cornwall's Light Infantry.	349	345	1	-	1	1	18.90	968.5	2.58	42.98	54.15	19.76	19.99	Cairo, 64 months. Abbassiyeh. To England, 11 July 1886.	1
2nd	Royal Sussex Regiment	-	9	9	1	-	1	6.74	-	-	-	-	-	30.01	Frontier Field Force, 3 months; Ramleh, 24 months. To Gibraltar, 17 June 1886.	3
1st	South Staffordshire Regiment	420	592	17	-	17	54	37.30	1409.5	40.48	128.57	88.61	32.41	22.99	Frontier Field Force, 3 months; Ramleh, 24 months. To Gibraltar, 17 June 1886.	1
1st	Dorset Regiment	-	439	772	68	1	69	41.83	1753.5	157.17	166.29	86.28	34.55	19.77	Kaneh and Ramleh, 44 months; 9 months Assuan, Derawi, &c. To England, 25th July 1886.	1
1st	Welsh Regiment	-	360	805	9	-	9	37.46	2236.1	25.00	38.89	104.07	37.98	16.98	Cairo, 7 months; Detachment at Abbassiyeh. From Natal, 31 May 1886.	-
1st	Royal Highlanders	-	294	263	2	-	2	15.30	894.5	6.80	30.61	52.04	18.99	21.23	Cairo, 4 months; Abbassiyeh, Assout, To Malta, 1 May 1886.	4
2nd	Oxfordshire Light Infantry	-	171	246	3	3	6	14.92	1438.6	35.08	83.57	87.25	31.84	22.13	Abbassiyeh, 3 months. To India, 28 March 1886.	1
2nd	Essex Regiment	-	768	738	15	1	16	48	50.53	960.9	20.83	65.78	24.01	24.98	Frontier Field Force, 44 months; Ramleh, 74 months.	2
1st	Royal Berkshire Regiment	-	283	283	17	1	18	41	23.44	1000.0	63.60	144.37	32.83	30.23	Wady Halfa, 34 months; Ramleh, 1 month. To Malta, 31 May 1886.	2
1st	Royal West Kent Regiment	-	279	398	9	-	9	29	1426.5	32.26	103.94	75.27	27.47	19.26	Ramleh, 5 months. To Gibraltar, 8 June 1886.	3
1st	Shropshire Light Infantry	-	676	825	13	2	15	57	47.78	1385.2	22.17	84.33	25.80	21.14	Abbassiyeh, 8 months; Ramleh, Detachments, Suakin and Cairo.	1
3rd	King's Royal Rifles	-	122	96	1	-	1	6	8.00	786.9	8.19	49.18	65.57	30.41	Ramleh, 5 months. To Gibraltar, 31 May 1886.	4
2nd	Durham Light Infantry	-	607	863	37	2	39	85	60.75	1421.7	64.25	140.03	100.08	25.09	Frontier Field Force, 7 months; Ramleh, Cairo, &c., 6 months.	1

Brigade or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of Sickness.	Stations occupied during the Year.	Completed Years of Service in Foreign Commands.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
	Egypt—cont.												days.	days.		
1st	Gordon Highlanders	—	—	—	—	—	1	·01	—	—	—	—	—	—	—	—
1st	Cameron Highlanders	802	1,366	24	—	24	71	69·19	1703·2	38·92	88·53	86·27	31·46	18·46	Cairo, 7 months; Wady Halfa, 3½; Assuan, Assiout, 1½ months.	4
1st	Royal Dublin Fusiliers	85	120	—	—	—	6	7·54	1411·7	—	70·59	89·70	32·37	22·98	Ramleh, 2 months. To England, 27 February 1886.	—
2nd	Royal Dublin Fusiliers	105	108	—	—	—	—	6·06	1018·5	—	—	57·62	21·06	20·48	Cairo, 14 months, Abbassiyeh. To India, 19 February 1886.	1
	Mounted Infantry	232	331	10	—	10	10	17·71	1426·7	43·10	43·10	76·33	27·86	19·63	Frontier Field Force, Suakin, Abbassiyeh, 12 months.	Various
	Camel Corps	16	25	—	—	—	—	1·11	1562·6	—	—	69·37	25·32	16·20	Frontier Field Force, 2 months.	"
	Commissariat and Transport Corps.	195	102	6	—	6	12	7·31	523·1	30·77	61·54	37·49	13·08	23·15	Various stations	"
	Medical Staff Corps	304	229	7	—	7	26	16·14	753·3	23·03	85·52	53·09	19·37	25·72	"	"
	Ordnance Store Corps	199	153	5	—	5	13	9·09	768·8	23·13	65·33	45·08	16·67	21·03	"	"
	Military Police	79	43	2	—	2	2	2·35	544·3	25·32	25·32	30·88	10·86	19·95	"	"
	Garrison Staff and Departments.	21	5	2	—	2	1	·51	238·4	95·24	47·62	24·31	8·86	37·23	"	"

ABSTRACT No. XLIII.—Table taken from the Report of the Principal Medical Officer, showing the Admissions, Mortality, and Invaliding in each Corps serving in the Bengal Command during the Year 1886.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average daily Sick.	Ratio per 1,000 of Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hos- pital.	Deaths.	Invalids.	Average daily Sick.				
CAVALRY.													
1st Dragoon Guards	-	696	6	13	38.65	1474.6	12.71	27.54	77.65	28.34	19.22	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Rawal Pindi, $9\frac{1}{2}$ months; march, 3 months; Dett. Gharial, 5 months. Umballa, 12 months; Dett. Jutogh, 4 months	7 0
2nd "	-	980	13	3	43.71	1585.8	21.04	4.85	70.73	25.82	16.28	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Muttra, $9\frac{1}{2}$ months; Meerut, 1 month; march, 1 month.	1 0 $\frac{1}{2}$
3rd "	-	903	9	16	31.64	1941.9	19.35	34.41	68.04	24.84	12.79	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Sialkot, $9\frac{1}{2}$ months; march, 1 $\frac{1}{2}$ months; Depot, 2 months.	9 0
6th "	-	643	17	11	40.31	1314.9	34.76	22.49	82.43	30.09	22.88	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Meerut, 1 $\frac{1}{2}$ months; Depot, Meerut, $\frac{1}{2}$ month.	8 0
8th Hussars	-	1,257	8	21	55.55	2680.2	17.06	44.78	118.44	43.23	16.13	Lucknow, 12 months	2 11 $\frac{1}{2}$
17th Lancers	-	727	4	4	39.96	1376.9	7.58	7.58	75.68	27.62	20.06		
Total	-	5,206	57	68	247.82	1711.9	13.74	22.36	81.49	29.74	17.38		
ROYAL ARTILLERY.													
D/A Royal Horse Artillery	-	139	4	2	6.99	972.0	27.97	13.99	43.88	17.84	18.36	Sialkot, 12 months	10 0
E/A "	-	174	-	1	10.66	1048.2	-	6.03	64.22	23.44	22.36	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Lucknow, 10 months; march, 1 $\frac{1}{2}$ months.	10 0
F/A "	-	271	2	5	14.59	1672.8	12.36	30.86	90.06	32.87	19.66	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Meerut, 1 $\frac{1}{2}$ months; depot, Meerut, $\frac{1}{2}$ month.	11 0
G/A "	-	216	-	1	8.77	1375.8	-	6.37	55.86	20.39	14.82	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Umballa, 10 $\frac{1}{2}$ months; march, $\frac{1}{2}$ month.	11 0

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						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
L/A Royal Horse Artillery	160	270	2	5	14.94	1687.5	12.50	31.25	93.37	34.08	20.20	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Meerut, 11 months; march, $\frac{1}{2}$ month; Depôt, Meerut, $\frac{1}{2}$ month.	10 0
K/B "	160	179	2	1	9.33	118.7	12.50	6.25	58.31	21.28	19.02	Rawal Pindi, 12 months; Dett. Gharial, 5 months	6 0
N/B "	164	178	—	3	7.57	935.4	—	18.29	46.18	16.85	15.32	Umballa, 12 months	9 0
A/A Royal Artillery	144	217	1	4	8.47	1506.9	6.94	27.78	88.82	21.47	14.25	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Dinapore, 10 $\frac{1}{2}$ months; march, 1 month.	3 1 $\frac{1}{2}$
B/A "	160	238	2	3	11.17	1425.0	12.50	18.75	89.81	25.48	17.88	Mooltan, 12 months	6 0
G/A "	133	345	1	5	11.72	1835.2	5.46	27.32	64.04	23.38	12.40	Cawnpore, 12 months	6 0
1/1 Northern Division, R.A.	80	172	3	—	6.20	2150.0	37.50	—	77.50	28.29	13.16	Rawal Pindi, 3 $\frac{1}{2}$ months; Khysr Gully, 6 months.	0 9 $\frac{1}{2}$
1/1 Eastern "	68	66	—	—	2.13	970.6	—	—	32.06	11.70	12.06	Rawal Pindi, 2 months; Kalabagh, 4 $\frac{1}{2}$ months; march, 2 months.	1 10 $\frac{1}{2}$
1/1 London "	80	68	—	—	3.46	850.0	—	—	45.50	15.88	18.68	Campbellpore, 12 months	2 2
2/1 C.P. "	84	128	3	2	6.18	1523.8	35.71	23.81	73.57	26.85	17.62	Rawal Pindi, 4 $\frac{1}{2}$ months; Bars Gully, 5 $\frac{1}{2}$ months; march, $\frac{1}{2}$ month.	0 11
2/1 Scottish "	101	176	1	—	6.15	1742.6	9.90	—	60.89	32.23	12.75	Quetta, 5 months; Sakobi, 4 months	2 5
3/1 "	81	170	8	2	11.37	2008.8	98.77	24.69	140.37	81.24	24.41	Port Lahore, 9 $\frac{1}{2}$ months; march, $\frac{1}{2}$ month; Dett. Amritsar, 6 $\frac{1}{2}$ months.	2 11 $\frac{1}{2}$
3/1 South Irish "	24	74	—	—	3.06	3063.3	—	—	127.50	46.54	15.09	Rawal Pindi, 2 $\frac{1}{2}$ months; march, $\frac{1}{2}$ month	0 3
4/1 Lancashire "	100	208	2	6	8.35	2080.0	20.00	60.00	83.50	30.48	14.65	Rawal Pindi, 9 $\frac{1}{2}$ months; Port Lahore, 2 $\frac{1}{2}$ months; Dett. Gharial, 4 $\frac{1}{2}$ months.	7 0
5/1 "	110	131	2	4	7.49	1100.0	18.18	36.36	68.09	24.85	23.59	Fortress Gwalior, 2 $\frac{1}{2}$ months; Calcutta, 9 $\frac{1}{2}$ months; march, $\frac{1}{2}$ month.	11 0
5/1 Western "	121	127	—	1	3.20	1049.6	—	8.26	26.45	9.65	9.20	Quetta, 5 $\frac{1}{2}$ months; Camp Sakobi, 3 $\frac{1}{2}$ months	7 10 $\frac{1}{2}$
5/1 Welsh "	101	176	2	9	8.88	1742.6	19.90	89.11	87.92	32.09	18.48	Port Allahabad, 12 months	1 10

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						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
7/1 Northern Division, R.A.	36	36	—	—	1·71	1000·0	—	—	47·50	17·54	17·34	Camp of Exercise, Delhi, ½ month; Jutogh, 1½ months; march, 1½ months.	Yrs. mo. 8 0
7/1 Eastern "	97	117	—	1	5·89	1206·2	—	10·31	60·72	22·16	18·37	Campbellpore, 1½ months; Rawal Pindi, ½ month; Dett. Fort Attock, 10 months.	1 94
7/1 Southern "	99	144	2	2	6·13	1454·5	20·20	20·20	61·92	22·60	15·54	Camp of Exercise, Delhi, ½ month; Jhansi, 1½ months; Depôt, Morar, 1½ months.	11 0
7/1 Cinque Ports "	98	246	—	4	8·95	2310·2	—	40·83	91·33	33·33	13·23	Delhi, 12 months	1 1
8/1 Northern "	120	142	1	3	6·98	1183·3	8·33	25·00	53·17	21·23	17·94	Agra, 12 months	8 0
9/1 Eastern "	101	206	4	4	10·77	2039·6	39·60	39·60	108·63	38·92	19·08	Calcutta, 2½ months; Ferozepore, 9 months; march, ½ month.	2 94
9/1 Northern "	46	31	1	—	1·82	673·9	21·74	—	39·57	14·44	21·43	Darjeeling, 4 months; march, 1½ months	0 54
9/1 Cinque Ports "	8	14	2	—	1·08	1750·0	250·00	—	135·00	49·27	28·16	Dett. Darjeeling (not given)	3 74
J/2 Royal Artillery	153	153	1	2	7·06	1032·7	6·54	13·07	46·14	16·84	16·31	Camp of Exercise, Umballa, ½ month; Rawal Pindi, 94 months; march, 2 months; Dett. Ghazial, 44 months.	9 0
R/2 "	144	146	3	—	5·23	1006·9	20·83	—	36·32	13·26	13·17	Camp of Exercise, Delhi, ½ month; Jullundur, 8 months; Umballa, 2½ months; march, 1½ months; Depôt, Jullundur, 2 months.	9 0
K/2 "	161	324	3	3	10·75	2012·4	18·63	18·63	66·77	24·37	12·11	Morar, 1½ months; Meean Meer, 8½ months; march, 1½ months.	6 0
L/2 "	153	209	1	5	11·76	1322·8	6·33	31·65	74·43	27·17	20·54	Camp of Exercise, Delhi, ½ month; Meerut, 11 months; march, ½ month; Depôt, Meerut, ½ month.	7 0
M/2 "	123	211	1	3	10·75	1338·2	6·58	12·74	70·72	25·31	18·60	Peabawar, 12 months	6 0
N/2 "	146	197	2	1	7·53	1331·1	13·51	6·76	50·86	13·57	13·95	Camp of Exercise, Umballa, ½ month; Campbellpore, 8 months; Rawal Pindi, 1 month; march, 2½ months; Dett. Ghazial, 4½ months.	6 0
O/2 "	152	183	2	6	10·23	1226·3	13·16	39·47	67·30	24·57	19·86	Lucknow, 12 months	6 0

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						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
P/3 Royal Artillery	175	423	—	9	17.77	2417.1	—	51.43	101.54	37.06	15.33	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Barrack-pore, 10 months; march, $\frac{1}{2}$ month.	178 mo. 10 0
Q/3 "	154	240	7	—	10.79	1616.9	45.45	—	70.06	25.57	15.32	Saugor, 11 $\frac{1}{2}$ months; Jubulpore, $\frac{1}{2}$ month; march, $\frac{1}{2}$ month.	10 0
R/3 "	144	210	1	9	11.89	1458.3	6.94	62.50	82.57	30.14	20.07	Fyzabad, 12 months	10 0
B/4 "	109	145	1	2	6.27	1330.3	9.18	18.35	57.32	21.00	16.78	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Meerut, 8 $\frac{1}{2}$ months.	13 0
C/4 "	165	315	1	2	13.45	2032.3	6.45	12.90	86.77	31.67	15.53	Nowgong, 11 months; march, $\frac{1}{2}$ month	13 0
D/4 "	171	170	1	5	6.54	994.2	5.85	29.24	38.25	18.96	14.04	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Agra, 9 $\frac{1}{2}$ months; Meerut, 1 month; march, 1 month.	13 0
E/4 "	141	254	1	2	11.18	1861.4	7.02	14.19	79.29	28.94	16.07	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Allahabad, 10 months; march, $\frac{1}{2}$ month.	13 0
F/4 "	123	200	2	5	9.81	1562.5	15.63	39.06	76.64	27.97	17.90	Morar, 1 month; Bareilly, 7 months; march, 1 month.	13 0
G/4 "	130	184	2	6	8.92	1415.4	15.38	46.15	63.62	25.04	17.69	Camp of Delhi, $\frac{1}{2}$ month; Allahabad, $\frac{1}{2}$ month; Jubulpore, 7 months; march, $\frac{1}{2}$ month.	13 0
L/4 "	147	232	2	3	10.83	1878.2	13.61	20.41	74.01	27.01	17.12	Camp of Exercise, Umballa, $\frac{1}{2}$ month; Ferozepore, 10 $\frac{1}{2}$ months; march, 1 month.	10 0
M/4 "	40	60	—	—	2.29	1600.0	—	—	57.25	20.90	13.93	Saugor, 1 month	0 1
O/4 "	143	386	3	6	16.23	2039.3	20.98	41.96	113.85	41.55	15.39	Camp of Exercise, Delhi, $\frac{1}{2}$ month; Meerut, 10 months; march, $\frac{1}{2}$ month.	10 0
Q/4 "	23	41	—	—	1.55	1782.6	—	—	67.39	24.60	13.80	Bareilly, 2 $\frac{1}{2}$ months	0 2 $\frac{1}{2}$
Total	5,882	8,940	79	137	405.01	1519.9	13.43	23.29	63.96	25.13	16.54		
H. Coy. Royal Engineers	40	22	1	1	0.70	550.0	25.00	25.00	17.50	6.39	11.31	Roorkee, 12 months	19 0

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						Admissions into Hos- pital.	Deaths.	Invalids.	Average Daily Sick.			
INFANTRY.												
2nd R. W. Surrey Regiment -	864	1,113	13	14	76.11	1288.2	13.80	16.20	88.09	32.15	24.96	Yrs. mo. 9 0 Calcutta, 9 months; Dett. Cawnpore, 2½ months; Dett. Barrackpore, 6 months; Dett. Dum Dum, 3 months.
2nd R. Lancaster Regiment -	827	2,231	15	12	73.80	2768.2	18.14	14.51	89.24	32.57	11.81	Quetta, 9 months; Dett. Ziarat, 4½ months; Dett. Camp, Zardum, 2½ months.
2nd Northumberland Fusiliers	844	1,631	16	18	77.23	1920.6	18.96	21.33	91.50	33.40	17.39	Camp of Exercise, Umballa, 3 months; Meer, 10 months; march, 1½ months; Dett. Fort Lahore, 10½ months; Dett. Dalhousie, 12 months.
2nd R. Warwickshire Regt. -	927	1,398	7	6	55.78	1508.1	7.55	6.47	60.17	21.96	14.56	Jubbulpore, 12 months - - -
Dett. 2nd Liverpool Regiment	164	312	1	3	21.08	2026.0	6.49	19.48	136.88	49.96	24.66	Dett. Fyzabad, 2 months; Dett. Chakrata, 5 months (Headquarters at Burma).
2nd Norfolk Regiment -	578	684	9	8	41.48	1183.4	15.57	13.84	71.76	23.19	22.13	Sitapur, 12 months; Dett. Ranikhet, 6 months -
Half Bn. " -	416	507	7	-	20.40	1218.7	16.83	-	49.04	17.90	14.69	Benares, 12 months - - -
2nd Lincolnshire Regiment -	580	1,012	13	19	40.70	1744.8	22.41	33.76	70.17	25.61	14.98	Morar, 2 months; Roorkee, 10 months - -
Half Bn. " -	309	890	3	7	31.75	2880.3	9.71	22.65	102.75	37.50	13.02	Delhi, 10 months - - -
2nd Devonshire " -	601	1,091	23	9	44.07	1815.3	33.27	14.98	73.33	23.76	14.74	Jhansi, 12 months; Dett. Fortress Gwalior, 2 months; Dett. Sipri, 10½ months.
Half Bn. " -	341	495	3	-	21.00	1451.6	8.90	-	61.58	22.48	15.48	Nowgong, 12 months - -
1st Suffolk Regiment -	935	1,363	4	27	63.74	1447.1	4.23	23.88	68.17	24.88	17.20	Roorkee, 2 months; Rawal Pindi, 4 months; Kul- dunnah, 6 months; Dett. Thobas, 4½ months; Dett. Khysa Gully, 6½ months.
Half Bn. " -	54	156	1	8	3.62	2888.9	13.52	148.15	67.04	24.47	8.47	Delhi, 2 months - - -
2nd W. Yorkshire Regiment -	882	991	9	10	47.53	1123.6	10.20	11.34	54.23	19.79	17.63	Camp of Exercise, Umballa, 3 months; Mooltan, 10 months; march, 1½ months; Dett. Sialkot, 2 months; Dett. Dalhousie, 12 months.

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						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
2nd Leicestershire Regiment -	944	1,139	16	19	78.19	1206.6	16.96	30.13	83.83	30.23	25.06	Lucknow, 12 months; Dett. Ranikhet, 6 months -	11 0
2nd Royal Irish "	820	944	5	13	47.40	1181.2	6.10	15.85	37.96	21.10	18.33	Camp of Exercise, Umballa, 1 month; Subathu, 84 months; Umballa, 2 months; march, 1 month; Dett. Jutogh, 13 months.	1 11
2nd Cheshire "	1,001	1,084	11	6	45.44	1083.9	10.99	5.99	45.39	16.57	15.30	Camp of Exercise, Delhi, 1 month; Umballa, 34 months; Solon, 64 months; march, 1 month.	14 9
Dett. 1st E. Welsh Fusiliers -	318	668	18	15	46.36	3186.0	56.60	47.17	145.79	53.21	24.24	Dett. Lucknow, 11 months; Dett. Ranikhet, 6 months; Dett. Calcutta, 8 months (Head-quarters at Burma).	6 10
1st K.O. Borderers -	908	1,911	11	49	90.33	2104.6	12.11	53.96	99.46	36.31	17.25	Camp of Exercise, Delhi, 1 month; Meerut, 114 months; Dett. Fatehgarh, 104 months; Dett. Chakrata, 6 months.	12 0
2nd Scottish Rifles -	477	555	7	3	25.14	1163.5	14.68	6.29	52.70	19.24	16.53	Camp of Exercise, Delhi, 1 month; Choubuttia, 8 months; Bareilly, 1 month; Moradabad, 14 months; march, 1 month.	8 0
Hal' Bn. " -	379	495	10	11	19.33	1279.7	26.39	29.02	51.00	18.62	14.55	Shahjehanpur, 11 months - - - -	8 0
1st East Lancashire Regiment	763	1,533	5	25	69.41	2009.2	6.55	33.77	90.97	33.20	16.53	Ferozepore, 12 months; Dett. Dalhousie, 12 months.	7 0
1st East Surrey "	901	565	3	5	34.39	627.1	3.33	5.55	38.17	13.93	20.23	Camp of Exercise, Delhi, 1 month; Moradabad, 1 month; Ranikhet, 10 months; march, 1 month.	1 104
1st West Riding "	1,022	1,426	7	14	75.35	1386.3	6.85	13.70	73.73	36.91	19.29	Camp of Exercise, Umballa, 1 month; Rawal Pindi, 94 months; march, 2 months; Dett. Gharia, 5 months.	12 0
1st Border "	963	1,707	19	23	92.71	1738.1	19.96	34.16	97.38	35.55	19.62	Camp of Exercise, Delhi, 1 month; Slakot, 94 months; march, 14 months; Dett. Amritsar, 11 months.	13 0
2nd Royal Sussex "	818	884	4	2	43.64	1080.7	4.89	2.44	53.35	19.47	18.02	Rawal Pindi, 54 months; Camp Tops, 6 months; march, 1 month.	1 0
2nd Derbyshire "	873	1,754	13	7	63.55	1886.3	14.89	8.03	73.79	29.57	13.38	Camp of Exercise, Umballa, 1 month; Dum Dum, 10 months; march, 14 months; Dett. Dinapore, 3 months; Dett. Barrackpore, 6 months.	4 2

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						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.			
1st L. North Lancashire Regiment.	816	1,110	9	1	31.48	1360.3	11.03	1.23	38.52	14.06	Quetta, 7 months; march, 1 month; Dett. Camp Harnal, 2 months; Dett. Camp Singaini, 1 1/2 months; Dett. Camp Ziarat, 7 months; Dinapore, 9 months; Dett. Chunar, 8 months -	2 10
1st South Yorkshire Regiment	790	1,347	16	13	50.48	1706.1	20.25	16.46	63.84	23.30	Peshawar, 6 1/2 months; Cherat, 5 1/2 months -	15 0
4th King's Royal Rifle Corps	1,009	1,372	16	10	68.90	1359.8	15.86	9.91	63.29	24.92	Peshawar, 12 months; Dett. Cherat, 5 months -	10 0
2nd Wiltshire Regiment	845	1,685	23	10	81.61	1783.1	24.34	10.58	80.36	31.52	Peshawar, 12 months; Dett. Cherat, 5 months -	4 11
2nd Manchester "	786	1,159	5	7	53.54	1471.6	6.36	8.91	74.48	27.18	Camp of Exercise, Umballa, 1 1/2 months; Allahabad, 12 months; Dett. Fort Allahabad, 12 months; Dett. Chunar, 4 months; Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	4 11
1st Durham Light Infantry	665	1,845	10	19	70.81	2774.4	15.04	28.57	105.73	38.59	Allahabad, 12 months; Dett. Fort Allahabad, 12 months; Dett. Chunar, 4 months; Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	4 11
2nd Highland "	942	1,024	15	2	54.72	1087.0	15.92	2.12	58.09	21.20	Allahabad, 12 months; Dett. Fort Allahabad, 12 months; Dett. Chunar, 4 months; Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	15 0
2nd Seaforth Highlanders	968	1,598	10	21	80.48	1609.3	10.07	21.15	81.00	29.56	Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	2 2
1st Royal Irish Fusiliers	947	1,290	18	11	57.14	1362.2	19.01	11.62	60.34	22.02	Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	8 1 1/2
1st Connaught Rangers	810	1,318	26	9	73.72	1027.2	32.10	11.11	91.01	33.22	Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	8 0
1st Leinster Regiment	908	1,800	11	24	71.71	1362.7	11.02	24.05	71.85	26.23	Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	10 0
4th Bn. Rifle Brigade	944	872	8	12	43.64	923.7	8.47	12.71	46.23	16.87	Camp of Exercise, Delhi, 3 months; Umballa, 2 1/2 months; Deochi, 7 1/2 months; march, 1 1/2 months; Camp of Exercise, Delhi, 1 month; Bareilly, 1 1/2 months; Meerut, 1 month; march, 1 month; Dett. Moradabad, 11 months; Dett. Bankhet, 6 months; Camp of Exercise, Umballa, 1 month; Nowshera, 1 1/2 months; march, 1 1/2 months; Dett. Cherat, 5 months; Dett. Fort Attock, 9 months; Camp of Exercise, Umballa, 1 month; Jullundur, 1 1/2 months; Umballa, 1 month; march, 1 1/2 months; Dett. Bhagat, 5 1/2 months; Dett. Dag-shah, 7 months; Allahabad, 9 months; Calcutta, 3 months; Dett. Frazabad, 2 months; Dett. Meerut, 2 months; Dett. Meerut, 2 months; Chakrata, 7 1/2 months; march, 1 month.	14 0
Total	20,133	44,549	419	472	2062.41	1329.2	14.38	16.20	71.82	26.22		

Corps	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Average Duration of each Case of Sickness.	Station occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.			
Men Attached (Corps, not stated).	455	367	9	1	11.70	806.6	19.78	—	25.71	9.39	Various station hospitals.	
Garrison Staff and Departments.	1,007	832	37	47	83.81	875.9	36.74	46.67	88.19	32.19	Various station hospitals.	
Grand Total	39,558	50,966	602	725	2846.45	1515.9	15.22	18.33	71.96	26.26		

ABSTRACT No. XLIV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the MADRAS COMMAND for the Year 1886.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.	
						Admissions into Hos- pital.	Deaths.	Invalids.	Average Constantly Sick.				
CAVALRY.													
7th Hussars	63	35	—	—	—	680.98	—	—	—	—	Arrived at Secunderabad from Hounslow, 28th December 1886. Bangalore Secunderabad 91, to England 23rd October 1886.	months. 9 days. yrs. mo. 10 0 4 9	
12th Lancers	453	503	6	12	31	1110.98	13.25	26.49	68.43	24.98			
14th Hussars	329	360	3	4	23	1063.63	9.12	12.16	66.87	24.41			
Details of Cavalry	23	18	—	7	2	818.18	—	318.18	90.91	33.18			
Total	867	906	9	23	55	1067.18	10.50	36.84	64.18	33.42			
ROYAL ARTILLERY.													
H/B Bde. Royal Horse Artillery	146	178	4	1	10	1219.2	27.40	6.85	68.49	35.00	Secunderabad	12 1	
M/B "	149	111	4	4	7	744.9	26.86	26.85	46.98	17.15	Bangalore	11 8	
D/1 Royal Artillery	139	189	—	1	10	1369.7	—	7.19	71.94	36.26	Secunderabad	12 3	
P/1 "	130	237	—	5	12	1823.1	—	38.46	92.31	33.69	St. Thomas' Mount	12 7	
Q/1 "	133	243	1	10	11	1827.1	7.52	75.19	82.71	30.19	St. Thomas' Mount	12 8	
R/1 "	141	188	1	4	13	1333.3	7.06	28.37	85.11	31.06	Belgaum	12 1	
S/1 "	157	108	1	3	7	667.9	6.37	19.11	44.53	16.27	Bangalore, 11½, and on the march to Bellary. †	11 7	
T/1 "	149	202	1	—	10	1365.7	6.71	—	67.11	24.50	Kamptee	12 2	

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hos- pital.	Deaths.	Invalids.	Average Constantly Sick.				
G/2 Bde. Royal Artillery	150	160	2	3	7	1062.9	12.58	18.87	44.03	16.07	15.12	Bellary	months, yrs. mo. - 12 11 10
M/2 " "	140	98	—	1	7	657.7	—	6.71	40.98	17.15	26.07	Bangalore	- 12 8 1
I/3 " "	141	221	2	1	12	1567.4	14.18	7.09	85.11	31.06	19.82	Secunderabad	- 12 6 11
I/4 " "	68	222	3	—	6	3264.7	44.12	—	88.24	32.21	9.86	Arrived from England, 14th February 1886, St. Thomas Mount, 2; Wellington, 6; and Bangalore, 2.	0 10
5/1 Bde. Southern Divn. R.A.	16	18	—	3	1	1125.0	—	187.50	62.50	22.81	20.23	Thayetmyo, 2, and Burma Field Service, 10	10 10
6/1 " " "	124	129	3	—	6	1040.3	24.19	—	46.39	17.66	16.98	Rangoon, 12 (detachments at Thayetmyo and Tounzoo).	10 10
4/1 " Welsh "	102	116	2	2	6	1137.2	19.61	19.61	58.82	21.47	18.83	Secunderabad	7 2
4/1 " North Irish "	74	110	2	—	6	1486.5	27.03	—	81.08	29.89	19.91	Burma Field Service, 3, and Madras, 9	5 1
3/1 " South Irish "	40	154	—	—	8	3142.8	—	—	163.27	59.89	18.96	Thayetmyo, 9, and left for Bengal	1 1
8/1 " London "	19	31	1	1	3	1631.5	52.03	52.03	137.89	57.63	35.32	Toungoo and Burma Field Service, 12	10 10
Details, R.A.	66	47	1	—	3	712.1	15.15	—	45.45	16.20	23.30		
Total	2,111	2,771	28	39	144	1312.6	13.26	18.47	68.21	24.90	18.97		
ROYAL ENGINEERS.													
K. Company, Royal Engineers	27	8	1	1	—	206.3	37.04	37.04	—	—	—		

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Sick.	Ratio per 1,000 of Strength.				Average Time to each Sick.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hos- pital.	Deaths.	Invalids.	Average Constantly Sick.				
INFANTRY.													
2nd Bn. Roy. Fusiliers C. L. Regiment.	878	1,329	7	46	76	1399.7	7.97	52.39	86.56	31.59	22.57	Cannanore (and detachment at Calicut and Malapporam), Rangoon, 4, and Burma Field Service, 7 1/2 months.	13 2
2nd Bn. P. A. Somersetshire Light Infantry.	206	241	10	8	15	1109.9	48.54	38.83	72.82	20.53	22.72	Bellary, 12 (Wing at Port St. George, 8)	8 10
2nd Bn. Bedfordshire Regt. -	981	1,326	10	20	88	1394.3	10.52	21.03	92.53	33.77	24.22	Thayetmyo and Toungoo, 9; Rangoon, and Port Blair, 3	10 10
2nd Bn. Royal Scots Fusiliers -	669	1,274	16	10	73	1853.2	24.28	15.17	110.77	40.43	20.91	Madras, 4, and Burma, 8	4 11
2nd Bn. South Wales Borderers.	784	1,631	17	14	86	2105.8	21.68	17.86	109.69	40.04	19.01	Secunderabad (arrived 2nd February 1886)	6 4
1st Bn. Hampshire Regiment	778	877	17	3	51	1127.2	21.85	3.86	65.55	23.93	21.23	Burma Field Service	0 11
2nd " " "	70	83	13	3	5	1185.7	185.71	42.86	71.43	26.07	21.99	Arrived from Egypt, 11th April 1886, Bangalore, 8 (one company at Belgaum).	14 0
2nd Bn. Oxfordshire Light Infantry.	616	637	2	2	50	1024.1	3.25	3.25	58.44	21.33	20.63	Secunderabad, 12 (detachment, Kamptee and Secetabuldee),	0 9
2nd Bn. Middlesex Regiment	941	1,153	11	4	62	1225.3	11.60	4.25	65.89	24.05	19.63	Kamptee and detachment at Secetabuldee, 8 1/2, and Burma Field Service, 3 1/2	6 4
2nd Bn. Royal Munster Fusiliers	705	800	2	17	42	1134.7	2.84	24.11	59.57	21.74	19.16	Belgaum, 8 1/2; and Burma Field Service, 3 1/2	2 9
1st Bn. Rifle Brigade -	673	703	5	16	53	1044.6	7.43	23.77	78.76	28.74	27.52		0 3
Details of Infantry -	188	277	13	4	22	1473.4	69.15	21.23	117.02	49.71	28.99		
Total	7,449	10,251	123	147	609	1376.1	16.51	19.73	81.76	29.84	21.68		

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hos-pital.	Deaths.	Invalids.	Average Constantly Sick.				
CONVALESCENT DEPÔTS.													
Poonamallee - - -	104	506	8	32	42	3085.3	48.78	186.12	226.10	93.48	30.30		
Wellington - - -	413	706	7	21	44	1709.4	16.95	50.85	106.54	38.89	22.75		
Total - - -	577	1,212	15	53	86	2100.5	26.00	91.85	149.05	54.40	25.90		
Garrison, Staff, and Depart-ments.	178	148	6	4	9	831.4	33.71	22.47	50.56	18.46	22.20		
Grand Total - - -	11,199	15,296	132	267	903	1365.8	16.25	23.84	80.63	29.43	21.55		

ABSTRACT No. XLV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the BOMBAY COMMAND for the Year 1886.

Corps.	Completed Years of Service in Command.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to each Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
							Admitted.	Died.	Invalided.	Constantly Sick.			
CAVALRY.													
7th Dragoon Guards	3	472	850	5	25	56.34	1800.8	10.59	52.97	119.36	43.57	24.19	Mhow, 12 months.
ROYAL ARTILLERY.													
D Battery, B Brigade R.H.A.	13	—	—	—	15	.01	—	—	—	—	—	—	Kirkee, 6 days.
G " B " "	1	138	284	2	1	15.48	2037.9	14.49	7.25	112.17	40.94	19.90	Mhow, 10 months.
I " B " "	1	141	152	4	4	7.23	1078.0	28.37	28.37	51.28	18.71	17.86	Kirkee, 12 months.
E " 1 " R.A.	3	136	325	1	4	16.18	2339.7	7.35	29.41	118.97	43.42	18.17	Nemuch, 12 months.
F " 1 " "	—	146	178	—	5	9.70	1205.5	—	34.25	66.44	24.25	20.12	Ahmednagar, 12 months.
T " 1 " "	2	151	226	1	—	13.17	1496.7	6.62	—	87.22	31.83	21.27	Karachi, ½ month; Hyderabad, 11½ months.
A " 2 " "	12	180	266	6	3	9.79	1955.9	44.12	22.06	71.98	26.27	13.43	Deesa, 10 months; Ahmedabad, 2 months.
B " 2 " "	12	131	207	4	3	10.94	1530.1	30.53	22.90	83.51	30.43	19.29	Mhow, 1 month; Nasirabad, 10 months.
C " 2 " "	11	147	277	5	1	12.38	1884.3	34.01	6.80	84.22	30.74	16.31	Hydrabad, 1 month; Karachi, 11 months.
D " 2 " "	12	152	350	2	8	15.55	2302.6	13.15	52.63	102.30	37.34	16.22	Ahmedabad, 10 months; Deesa, 1 month.
E " 2 " "	12	148	296	—	8	12.36	1391.9	—	54.05	83.51	30.48	21.90	Karachi, ½ month; Kirkee, 11½ months.
F " 2 " "	12	158	172	1	6	8.08	1088.6	6.53	37.97	51.14	18.66	17.15	Kirkee, 11½ months.

Corps.	Completed Years in Service in Command.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
							Admitted.	Died.	Invalided.	Constantly Sick.			
G Battery, 3 Brigade R.A.	1	117	142	2	2	8.52	1213.7	17.09	25.04	72.82	26.58	21.90	Kirkee, 9 months.
A " 4 " "	12	130	221	2	5	12.24	1700.0	15.38	38.46	94.15	34.37	20.22	Neeuch, 10 months.
E " 4 " "	2 mos.	25	30	—	—	1.00	1200.0	—	—	40.00	14.60	12.17	Kirkee, 1½ months.
9 Batt., 1 Brgd., R.A., N. Dn.	8	25	41	—	1	1.36	1040.0	—	40.00	54.40	19.86	12.11	Quetta, 8 months.
2 " 1 " E. Dn.	1 mo.	14	43	—	—	1.96	3071.4	—	—	140.00	61.10	16.64	Colaba, 1½ months.
8 " 1 " C.P. Dn.	5	90	124	—	4	6.55	1377.8	—	44.44	72.78	26.56	19.28	Mhow, 12 months.
1 " 1 " West. Dn.	1	96	180	1	9	7.88	1875.0	10.42	93.75	81.56	29.77	15.88	Colaba 8 months; Aden, 4 months.
5 " 1 " "	7	20	42	—	2	2.44	1615.4	—	76.92	83.85	34.26	21.20	Quetta, 3 months.
1 " 1 " Scot. Dn.	1	110	173	—	7	9.83	1372.7	—	63.64	89.36	32.62	20.74	Colaba, 11 months; Aden, 1 month.
2 " 1 " "	3	26	45	1	—	1.89	1730.8	38.46	—	72.69	26.53	15.33	Sibi, 3 months.
5 " 1 " N.Ir. Dn.	11	113	164	4	7	7.74	1451.3	35.40	61.95	88.49	29.00	17.23	Colaba, 3½ months; Aden, 8½ months.
6 " 1 " S.Ir. Dn.	11	102	130	—	4	6.09	1374.5	—	39.21	59.70	21.79	17.10	Aden, 11 months.
Total	—	2,458	3,376	36	100	198.82	1017.6	14.65	40.08	80.68	29.45	18.20	
Royal Engineers	—	25	9	—	3	.42	360.0	—	120.00	16.80	6.13	17.03	Kirkee, 12 months.

Corps.	Completed Years of Service in Command.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
							Admitted.	Died.	Invalided.	Constantly Sick.			
INFANTRY.													
2nd Royal Lancaster Regiment	6	105	119	2	6	8.36	1133.3	19.05	57.14	79.62	29.06	25.64	Poona, 2½ months; Quetta, 4 months.
2nd East Yorkshire Regiment	12	873	1,419	15	46	61.49	1635.4	17.18	52.60	70.43	25.71	15.82	Colaba, 12 months.
2nd Lancashire Fusiliers	5	802	1,407	3	9	61.41	1769.3	3.74	11.22	76.57	27.95	15.08	Nasirabad, 12 months.
2nd Gloucestershire Regiment	7	881	1,172	4	25	67.43	1330.3	4.54	28.37	76.54	27.94	21.00	Ahmednagar, 12 months.
2nd Dorsetshire Regiment	13	568	558	8	7	18.08	982.4	14.08	12.32	31.83	11.62	11.83	Aden, 11 months.
1st Oxford Light Infantry	14	593	1,004	9	20	47.54	1844.8	15.18	33.72	80.17	29.26	15.86	Poona, 10 months; Quetta, 2 months.
1st Worcestershire Regiment	8	917	1,511	9	7	80.18	1647.8	9.81	76.33	87.44	31.91	19.37	Karachi, 12 months.
1st Loyal N. Lanc. Regiment	3	261	338	5	2	11.58	1295.0	19.16	7.66	44.37	16.19	12.50	Harusi, 3 months; Mhow, 1½ months.
2nd North Stafford Regiment	6	752	1,340	7	16	70.57	1781.9	9.31	21.28	98.84	34.25	19.23	Aden, 1 month; Mhow, 10½ months.
2nd Royal Dublin Fusiliers	1	702	703	6	9	38.61	1001.4	8.55	12.82	55.00	20.07	20.05	Poona, 10 months.
Total	—	6,454	9,661	68	147	465.25	1496.9	10.54	22.78	72.00	26.31	17.58	
DEFORS. &c.													
Colaba Depot	—	85	140	5	9	17.07	1647.0	58.82	105.88	200.82	73.30	44.50	Colaba, 12 months.
Deolali Depot	—	484	897	8	3	22.37	1440.1	16.53	6.20	46.22	16.87	11.71	Deolalee, 12 months.
Convalescents	—	108	198	1	10	11.48	1833.3	9.26	92.59	106.30	38.90	21.16	Purandhar, 12 months.

Corps.	Completed Years of Service in Command.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to each Sick Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
							Admitted.	Died.	Invalided.	Constantly Sick.			
Depôts, &c.—continued.													
Convalescents	—	29	63	—	—	3.40	2172.4	—	—	117.24	42.79	19.70	Taragarh, 7 months.
"	—	103	243	2	—	8.71	2407.8	19.42	—	84.56	30.87	12.81	Mount Aboo, 12 months.
Garrison Staff and Departments	—	101	33	2	4	.95	328.7	19.80	39.60	9.40	3.43	10.51	
Various Corps	—	244	221	11	9	20.29	905.7	45.08	36.88	83.15	30.35	33.51	
Troops on the March	—	344	132	2	—	3.38	441.9	5.81	—	9.82	3.50	8.12	
Military Prison	—	91	120	—	1	5.83	1318.7	—	10.99	64.06	23.38	17.73	Poona, 12 months.
Rest Camp	—	2	—	—	—	—	—	—	—	—	—	—	Khundwa, 12 months.
Total	—	1,591	1,872	31	36	93.48	1178.6	19.48	22.63	58.75	21.44	18.23	
Grand Total	—	11,000	16,308	140	311	813.81	1438.0	12.73	28.18	73.98	27.00	18.15	

ABSTRACT XLVI.—RETURN showing the COMPARATIVE SICKNESS, MORTALITY, and INVALIDING of MEN who have extended their service in India, and those who have not, stationed in the Bengal, Madras, and Bombay Presidencies during the year 1886.

	BENGAL.*						MADRAS.						BOMBAY.†					
	Average annual strength.	Number admitted into Hospital.	Died in and out of Hospital.	Invalided to England.	Average number constantly Sick.	Average annual strength.	Number admitted into Hospital.	Died in and out of Hospital.	Invalided to England.	Average number constantly Sick.	Average annual strength.	Number admitted into Hospital.	Died in and out of Hospital.	Invalided to England.	Average number constantly Sick.			
Regimental, warrant, and non-commissioned officers and men who have extended their service in India.	6,160	6,702	75	115	201.61	1,962	1,412	24	41	75.00	1,294	1,728	16	34	86.83			
		—	1088.0	12.18	18.67	47.34	—	712.41	12.11	20.68	37.84	—	1335.39	12.36	26.27	67.09		
Regimental, warrant, and non-commissioned officers and men whose service has not been extended.	30,290	51,060	515	609	2518.26	9,217	13,884	168	226	828.00	8,725	13,619	111	274	695.70			
		—	1686.4	17.00	20.11	83.14	—	1506.35	17.14	24.52	89.83	—	1560.91	12.72	31.40	79.73		
Totals of both classes -	36,450	57,782	590	724	2809.87	11,180	15,296	182	267	903.00	10,019	15,347	127	308	782.52			
Ratio per 1,000 of strength -	—	1585.2	16.19	19.86	77.09	—	1365.84	16.25	23.84	90.63	—	1631.78	12.67	30.74	78.10			

* Excluding men in camp Gharial from whence the necessary information has not been received.

† The strength and statistics of the men treated in the station hospital, Deolalie, the Rest-Camp, Khundwa, and of troops on the line of march have not been included in this statement.

APPENDIX No. 1.

REPORT OF A CASE OF PERICARDITIS WITH EFFUSION.

By Surgeon W. H. HORROCKS, Medical Staff.

Private W. B., 1st Northampton Regiment, 19 years of age, 12 months' service.

Was admitted into the Second Station Hospital, Aldershot, on the 20th of June 1887, suffering from pericarditis with effusion. He was carefully treated for two months, but, making no improvement, was transferred "for nursing" to the Cambridge Hospital.

On admission he stated that he had been quite well up to a week before admission into the Second Station Hospital, when he began to suffer from shortness of breath; he had no pain in the chest, or any other symptom of disease. He had never suffered from rheumatic fever, but in January 1887 had an attack of measles, for which he was treated in the North Camp, and apparently recovered without any sequelæ.

Physical Condition on admission into the Cambridge Hospital.

"He is a light-complexioned boy with a slightly built, emaciated frame, congested eyelids and lips, and a tendency to clubbing about the fingers. He suffers from a constant hacking cough, without expectoration, and marked cardiac orthopnoea."

Physical Signs.

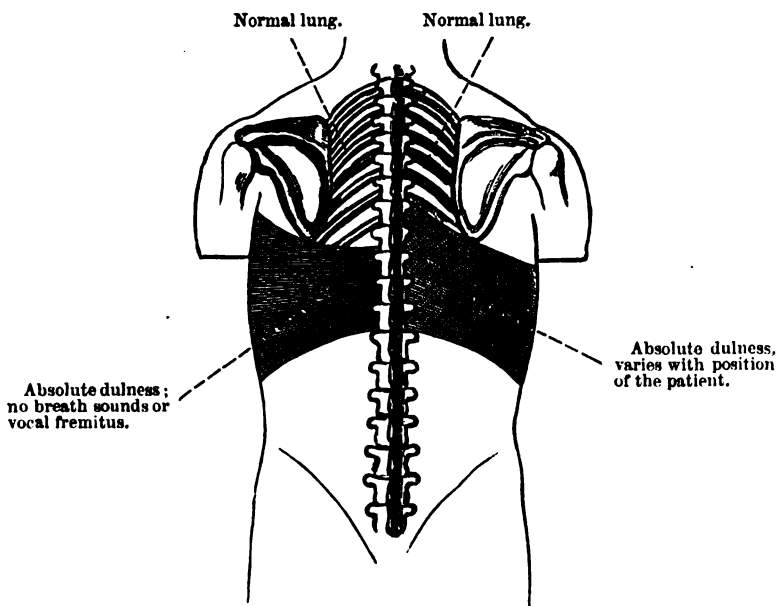
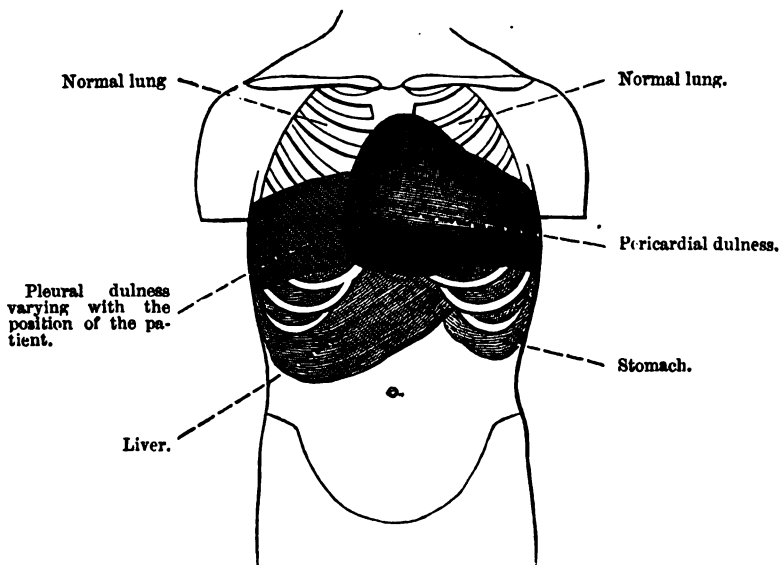
Chest fairly formed, but small. Marked retraction of the lower edge of the thorax during inspiration.

Cardiac area slightly bulged; no apex beat to be seen or felt. Dulness much increased, extends upwards to the second rib, to the right one inch beyond the right border of the sternum, to the left into the general dulness all over that side below the scapula. On auscultation no pericardial friction could be detected, and faint normal heart sounds could be heard all over the area of dulness in the front of the chest. Jugular veins slightly distended, pulse 100, small, compressible, and occasionally irregular.

Right side of thorax.—Absolutely dull up to the fourth interspace in front and angle of scapula behind, line of dulness varied with the position of the patient, vocal fremitus diminished over the area of dulness. On auscultation exaggerated breath sounds were heard over the apex, very faint breath sounds with occasional loose crepitant rales over the base.

Left side of the chest.—Absolute dulness over the base, below the angle of the scapula and the axilla, which gradually merges in front into the cardiac dulness. Normal breath sounds heard over the apex, but no respiratory murmur was obtained over the area of dulness.

Liver and spleen pushed down by the depression of the diaphragm. Temperature 101° F. The above physical signs are depicted on the two diagrams below.



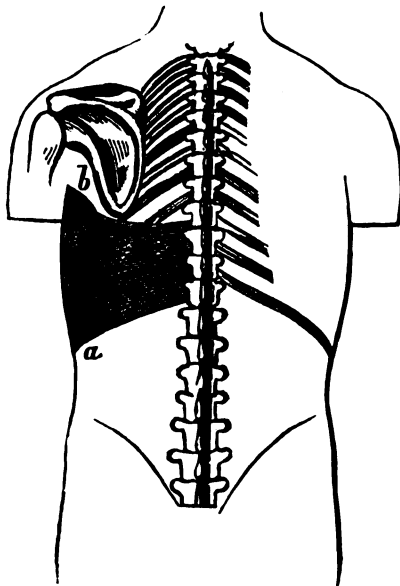
I diagnosed the patient to be suffering from pericarditis with effusion, complicated by effusion of serum into both pleural cavities. On the left side it was extremely difficult to tell by physical signs how much of the dulness was caused by effusion into the pleura and how much by effusion into the pericardium. The extension of dulness in the conical manner depicted up to the second rib on the left side is absolutely diagnostic of pericardial effusion ;

consequently I was sure that there must be pericardial plus pleural effusion, but could not then decide the exact proportions of these two factors. The patient was treated by absolute rest in bed, fluid, nutritious diet, digitalis and salines, with occasional doses of ammonia and æther, and counter-irritation to the chest. After watching the patient for a few days and finding that the physical signs remained unchanged, I aspirated the right base and drew off 25 ozs. of rather thick serous fluid. Next day I aspirated the left base and removed 15 ozs. of "blood-stained serum." For about a week the patient was much relieved and able to lie down at night. On September 10, the fluid having re-accumulated in the right pleural cavity, I again aspirated and removed 28 ozs. of serous fluid; the patient was much relieved, and from this date fair breath sounds were heard over the right base, but the area of dullness on the left side remained unchanged.

On October 15 I detected prolongation of the respiratory murmur at the right apex, and fine crepitant rales were heard all down the front of the right upper lobe, and in both interscapular regions. On October 21 I again aspirated the left base, close to the posterior axillary line, and removed 5 ozs. of blood-stained serum. A few days later, after a very careful physical examination, I could detect heart sounds and faint cardiac pulsation all over the cardiac area of dullness and with diminished intensity in the axilla as far as the posterior axillary line, and came to the conclusion that this was the line of separation between the pericardial and pleural effusions. Acting on this supposition, I carefully introduced the needle of a hypodermic syringe close to the anterior axillary line, and removed a syringe full of blood stained serum.

Being now almost certain that I had on both the former occasions tapped the pericardium through its left side and posterior surface, with great relief to the patient, I asked permission to make a more formal tapping of the pericardium close to the anterior-axillary line; but, unfortunately, two days later, the patient was seized with a sudden attack of dyspnœa, and died before anything could be done.

DIAGRAM to indicate the extension of pericardial effusion to the posterior axillary line and the position of the three aspirations.



- 1, first tapping.
 - 2, second tapping.
 - 3, hypodermic aspiration.
- } Blood-stained serum obtained in all these aspirations.
- a, b, post-axillary line up to which point faint cardiac pulsation was felt after the second aspiration.

Extract from the Post-mortem Report.

Thorax.—On opening this cavity the pericardium was found immensely distended, stretching upwards to the second rib, downwards to the level of the xyphoid cartilage (the diaphragm, liver, and stomach being much depressed), on the *left to the posterior axillary line*, on the right to about one inch and half beyond the right border of the sternum.

The pericardium measured $9\frac{1}{2}$ inches in its greatest transverse diameter and $7\frac{1}{2}$ inches in the vertical diameter. On opening its cavity 30 ozs. of serous fluid escaped. The walls were $\frac{1}{4}$ inch thick and lined by a thick soft oedematous greyish membrane. On the left side, and towards the posterior surface, was found a small patch of ecchymosis with a depressed scar-like centre, and through this it is probable the aspirating needle passed.

The visceral layer of the pericardium was also greatly thickened by the same oedematous soft lymph.

Over the apex, left border and posterior surface of the heart, very thick soft adhesions were found.

The heart when divested of lymph appeared to be rather small; the mitral valve was slightly thickened at the edge, and its chordæ tendinæ were shortened. It, however, appeared to be competent, and had no nodular deposits on its surface.

The left pleural cavity was obliterated as far as the posterior axillary line; behind that line its cavity was small, only about one inch in depth over the base, and contained a small quantity of reddish-coloured serum. The right lung, universally crepitant and resonant on percussion, was the seat of disseminated grey miliary tubercle, surrounded partially by catarrhal pneumonia and partially by simple congestion.

The left lung, reduced to an organ about 5 inches long and $2\frac{1}{2}$ inches thick, presented the same appearances as the right lung.

This report shows conclusively the correctness of the diagnosis, and indicates that the pericardium was aspirated at least once during life. Owing to the condition of the lungs, the great thickness of the pericardial walls, and the number and size of the adhesion, it is not likely that the patient would have survived many days longer, even supposing that the pericardium had been successfully aspirated from the front.

The case is very interesting, and shows to what an immense size the pericardium may be distended, and how it may almost completely fill the left side of the chest, and be readily mistaken for a pleural effusion; and when accompanied by such an effusion its extent is almost impossible to diagnose, save by the uncertain signs of feeble cardiac pulsations and heart sounds transmitted through the fluid.

The blood-stained serum obtained at every aspiration of the left side might have lead one to suppose that either the heart or lung tissue had been injured by the aspirating needle; such, however, was not the case, and Kussmaul states that blood-stained serum is obtained in a large per-centage of pericardial effusions without any injury to the viscera, and may almost be said to be characteristic of pericardial effusions.

APPENDIX No. II.

A CASE OF ABSCESS OF THE BRAIN.

By Surgeon J. R. DODD, M.D., F.R.C.S. Eng., Medical Staff.

No. 3144, Private T. R., 8th Hussars, aged 20, was admitted into the Station Hospital at Canterbury on the evening of October 27th, 1887, suffering from a profuse discharge of most offensive pus from both ears; with great pain at the top of the head, and impairment of vision in the right eye (which symptom speedily disappeared), accompanied by general malaise.

History. Was a sailor previous to enlistment. Was brought up at Deal. Was always a delicate lad, as also was his brother. Never had scarlatina. (The ear trouble and the condition of his kidneys lead one to doubt this assertion.) Has had a discharge from the ears for a long time. Has just returned from a furlough at home, where he was very ill for some days, and consulted one of the medical officers at the Marine Dépôt, Walmer; and was by him recommended to return to Canterbury and report himself sick which he accordingly did.

Condition on admission. Perfectly sensible and intelligent. Pupils equal, optic disc of right eye examined with the ophthalmoscope and found normal in appearance. No vomiting; no paralysis. Is rather deaf, especially in the right ear. Both ears full of most offensive pus. Has great pain in the head.

Treatment. Ears to be syringed with weak Condy's fluid lotion (slightly warmed) three times a day. A little cotton wool and iodoform to be lightly inserted into the ears after each syringing. Ordered a purge, cold to the head, and a blister to the back of the neck.

Progress. On November 1st he was much better, free from pain in the head, and able to eat "Half" diet. He was then ordered iodide of potash and citrate of iron and quinine, and blisters were applied occasionally to the nape of the neck and behind the right ear. On November 8th it was noticed that he had facial paralysis on the right side. Everything pointed to the paralysis being due to disease of the bony canal through which the 7th nerve passes, and not to lesion of the origin of the nerve in the brain. Soon after he was ordered cod-liver oil, and seemed to be going on well; but on the 15th of November he began again to complain of great pain in the head, for which he was ordered to take bromide of potash as well as iodide, and his head was shaved and blistered with the liniment of iodine. (His urine having been found to contain about $\frac{1}{3}$ th part albumen it was not thought advisable to use cantharides.) On November 18th he complained of tooth-ache, and I drew a badly decayed molar tooth indicated as the seat of pain; but his head-ache remained unrelieved. On November 20th he was almost unconscious, and required the use of the catheter. On the morning of the 22nd his temperature was 103°, he was quite conscious, complained of agonizing pain in the head; was able to pass his urine, and the discharge from the ears was noticed to have changed colour,

being on this date much darker in hue. About the same time the facial paralysis disappeared, and he was found to have perfect motion and sensation in all his limbs. "Tache cerebrale" well marked. On the morning of November 24th his temperature was $100\cdot2^{\circ}$, and he felt much better. He was able to sit up in a chair before the fire while his bed was made, and, in fact, objected most strongly to being kept in bed. Plantar reflex normal. On the morning of November 27th the note made in the case book was: "Much worse, requires to have his urine drawn off with a catheter, lies on his right side with neck retracted and rigid, is unconscious, pupils dilated, equal, eyes apparently intolerant of light." There was no paralysis of the limbs or difficulty in swallowing. At the evening visit I found him in much the same condition, except that his pulse was almost imperceptible, and his temperature was 103° . He died at 9 p.m.

Rigor mortis very marked. Brain meninges congested, and thickened and adherent along the borders of the superior longitudinal sinus. Convolutions flattened; abundance of yellow lymph and serum about the base of the brain and the medulla oblongata. Weight of the brain, 3 lbs. $2\frac{1}{2}$ ozs. White clots (apparently ante-mortem) in both lateral sinuses. On the right side of the base of the cerebellum a blackish, suppurating track was found leading backwards from the subarachnoid space into the 4th ventricle, which was full of foul pus. The floor of the 4th ventricle was blackish in colour, soft, and disorganised. The "Iter a tertio ad quantum ventriculum" was dilated to the size of a goose-quill, and as the brain lay on the table, base uppermost, large quantities of clear serum flowed through it from the lateral ventricles, which were also much dilated. There was a small quantity of yellow lymph over the upper surface of the cerebellum, at the posterior opening into the general ventricular cavity, but there was no abnormality in the choroid plexuses. The right internal auditory meatus was full of foul pus, and the right internal ear and the whole of the petrous portion of the temporal bone were softened and disorganized, being bathed in horribly offensive pus. The left internal ear was in a similar but less advanced condition.

Post-mortem
examination
18 hours after
death.

The kidneys were smaller than natural. The right weighed $4\frac{1}{2}$ ounces, the left 5 ounces. Both rather pale in colour, the capsules non-adherent, but the cortical substance was contracted. The right lung was adherent throughout, slightly congested, but floated in water. No appearance of tubercle. Other organs normal.

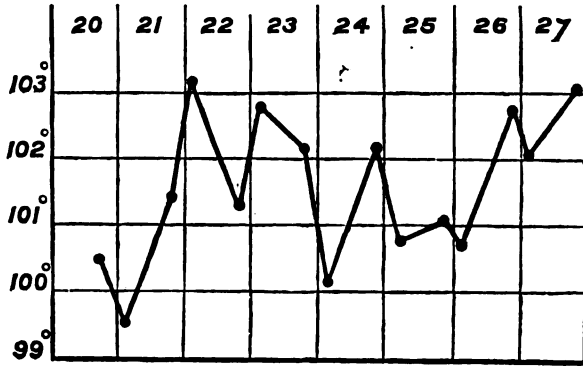
In the absence of a history of scarlatina, and of any appearance of scrofula or tubercle, it is probable that the disease was originated by diving and swimming in the sea. I regret that I did not inquire as to this point. On admission the case was diagnosed as abscess of the brain, but the great improvement in the symptoms which soon set in led to the disease being returned as simply suppuration of the ears, until during the last week of life, when the more serious nature of the case became no longer doubtful.

Remarks.

At no time during the progress of the case was surgical interference indicated. As regards the ears, there was never any redness, tenderness or swelling over the mastoid processes to lead to the idea that an opening there would facilitate drainage, and the post-mortem examination showed that the diseased bone could not have been reached even had trephining of the mastoid cells been practised. As regards the brain there were no convulsions, hemiplegia, or other local paralysis (with the exception of the facial paralysis of the right side above referred to, which was unaccompanied by any brain symptoms, and was evidently due to disease of the Fallopiian canal in the temporal bone) by which we could localize the lesion in the brain, and choose the appropriate situation for the application of the trephine. (The ear disease was bilateral.) The post-mortem examination showed how entirely the disease was beyond the reach of surgical aid, and that death was due to a hydrocephalic condition of the ventricles of the brain, and to lesion of the floor of the fourth ventricle; that part of the brain in which are situated the centres governing the functions most essential to life. It seems extraordinary that such a condition of the floor of the fourth ventricle should have been present (as it apparently had) for some time during life without giving rise to more marked

symptoms of derangement of the cardiac, pulmonary or heat centres. The pus had evidently reached the brain from the right internal auditory meatus, by passing backwards in the sheath of the facial and auditory nerves.

Temperature Chart from November 20th to the date of death.



APPENDIX No. III.

REPORT ON THE USE OF ANTIFEBRIN.

By Surgeon J. M. JONES, Medical Staff.

The cases all occurred either in the barracks, station hospital, or village of Shoeburyness, during the summer and autumn of 1887, and some of them were of a very severe type.

H. B., age 17, employed in the School of Gunnery, came to the station hospital on July 31st, 1887, complaining of pains in the head and feverishness. His temperature was found to be 103° ; tongue somewhat white and coated; no abdominal pain; bowels stated to be regular. On the morning of August 1st his temperature was 103° , and in the evening 103.2° . Antifebrin, 10 grs., were given on this and the following evening, but without result.

Case 1.
Simple continued fever.

On the evening of August 5th he was given antifebrin 10 grs. with quinine 5 grs. In two hours' time he was perspiring freely, and his temperature reduced to 96.2° . Slept well during the night; temperature next morning 99.6° ; tongue coated, but moist. Medicine was then stopped until August 7th, when he had antifebrin 5 grs. morning and evening, his temperature remaining at 100° . Daily small doses were given until August 12th, after which date the evening rise of temperature was but slight. Patient was discharged from hospital on August 26th.

Gunner C. J., R.A., joined at Shoeburyness on July 17th from Portsmouth, was employed on fatigue duty at the volunteer camp, and much exposed to the sun. He lived in a tent, and stated that for a week before coming to hospital he had been feeling unwell.

Case 2.
Enteric fever.

Was admitted on August 9th, and at that time complained of severe headache, constipation, and feverishness. In spite of repeated doses of antifebrin his temperature remained persistently high. On the evening of August 13th an abundant crop of spots appeared on the abdomen and back; he had some epistaxis, and during the night passed a most offensive and copious bloody stool. This case terminated fatally on August 16th. The first dose of antifebrin, 10 grs., reduced the temperature (August 12th) from 104° to 98.4° . No appreciable benefit resulted from the use of the drug in this case.

Gunner E. F., Royal Artillery, admitted into hospital August 23rd with a wound of one of his fingers, caused by a splinter of wood. While in hospital his temperature rose to 103.6° . Had previously, during August, been admitted with simple continued fever. On August 24th his tongue was brown and dry; bowels regular; no abdominal tenderness; no spots. At 7 p.m. his temperature was 104° , at 9.30 p.m., after antifebrin, 15 grs., the temperature fell to 99.2° ; pulse 100; respirations 24, with cold and clammy perspiration. Pupils were widely dilated; did not seem inclined to sleep. Mind perfectly clear.

Case 3.
Simple continued fever.

August 25th, morning, temperature was 102.4° . No cough; respirations 32; pupils normal; tongue moist and cleaner; bowels not moved. Given antifebrin, 15 grs., at 11 a.m., which lowered his temperature, at 1.30 p.m., to 99° ; pulse, 100; respirations 28. After this date antifebrin, 5 grs., were given morning and evening until August 28th, when his evening temperature was normal. Patient was discharged on September 5th, the 15th day of his disease.

This patient, Gunner C—, came to hospital on September 5th, complaining of an eruption on his right ear, which he stated was caused by a scratch. His temperature on that evening was 100.4° , and his face, nose, and cheeks somewhat swollen and red. Local applications were used.

Case 4.
Simple erysipelas of face.

On September 7th his face was very much swollen, his temperature, 104.4° ; pulse 92; tongue moist and creamy. Given antifebrin 15 grs., after which his temperature fell to 102° ; next day he appeared much better; morning temperature 100.2° , pulse 76, full. After antifebrin, 15 grs., his temperature in $3\frac{1}{2}$ hours fell to normal; pulse, 72; respirations 16; rising in the evening to 102° .

On September 9th he had 5-gr. doses of antifebrin morning and evening, his temperature after the second dose not again rising above 99° . Tongue still coated and white.

September 10th, appearance of face natural; seemed, however, to be very confused in his ideas (during the previous night he had wandered out of his ward under the impression, he said, that Russians were about). That evening was still a little incoherent, temperature, 98.8° ; pulse, 72; pupils rather unequally dilated.

September 11th, temperature normal. Slept well during the night. Quite rational in manner.

He continued to improve until September 19th, when he was discharged on the 16th day of his disease.

Case 5.
Enteric fever.

Child, W. J., age $2\frac{3}{4}$ years, was placed on the sick list on July 16, 1887, suffering from enteric fever. The case was a severe one, with persistent high temperature, and well marked head symptoms. Stools were not very frequent, but loose and characteristic. No eruption was detected. Treatment consisted in careful diet—milk, beef tea, diaphoretic and astringent mixtures, and antifebrin.

On July 25th, the 14th day of disease, his morning temperature was 103.2° , pulse 154. Antifebrin, 5 grs., in a little milk were given, and at 12.30 p.m. the temperature was found to be 98° , pulse 120. At 3.30 p.m., temperature 96° , pulse 116. At 6 p.m., temperature 96.4° , pulse 112. From this time the temperature gradually rose until, at 10.30 p.m., it was 101.4° , pulse 140, respirations 34.

July 27th. Evening temperature, 6 p.m., was 103° , pulse 140, respirations 32. Given antifebrin $1\frac{1}{2}$ grs., and the temperature taken at 10 p.m., when it was found to be 96.6° , pulse 120, respirations 28.

At midnight it was 98° , and on the following morning 102.2° .

July 31st. Morning temperature, 11 a.m., was 104.6° , pulse 180, respirations 40. Given antifebrin, $1\frac{1}{2}$ grs., which reduced the temperature to 95.2° at 5.20 p.m., pulse 140, respirations 30. Temperature remained the same until 9.15 p.m., after which it gradually rose.

Each dose of antifebrin caused slight perspiration, lessened the frequency of the pulse, and rendered the patient inclined for sleep.

Case 6.
Enteric fever.

Child, P. T., age 4, suffering from enteric fever, was first seen on September 9th, 1887, which appeared to be the sixth day of the disease from the account given by the parents. The temperature was 104° , pulse 140. Tongue coated with white fur, red at the tip and edges. Some abdominal tenderness present.

September 12th. Wandering a good deal. Spots on chest and abdomen. Tongue dry and furred. Bowels moved once, loose and yellow motion.

September 13th. Appears worse. Very drowsy. Slight cough. Crepitations heard at bases of each lung posteriorly; some dulness on percussion. Tongue very dry and brown.

September 14th. General condition the same. Bowels moved twice, once involuntarily. Temperature 102.6° , pulse 150, respirations 32.

September 15th. Evening temperature 103.2° . Given antifebrin, 3 grs., at 7 p.m. At 10 p.m. the temperature was normal, rising next morning to 102.6° .

September 16th. Antifebrin, 3 grs., at 11 a.m. Temperature at 1.30 p.m. 96.6° , pulse 116, respirations 20. At evening visit (6 p.m.) temperature was 100° , pulse 144, respirations 28. At 11.30 p.m. temperature 102° ; antifebrin, $1\frac{1}{2}$ grs., given. Temperature next morning 100.8° , pulse 124, respirations 24.

September 17th. Greatly inclined to sleep, but is easily roused. Very fretful. Pupils widely dilated. Temperature at 2.15 p.m. 102.4° . Given antifebrin, $1\frac{1}{2}$ grs. Temperature at evening visit was 96.6° , pulse 112, respirations 20, rising at 9.15 p.m. to 99° , and next morning to 100° .

September 19th. Temperature 102° . Antifebrin, $1\frac{1}{2}$ grs., was given, but without any result, the evening temperature being 102.8° , pulse 152, respirations 20.

Tongue brown and dry. Sordes on lips. No tympanitis or abdominal pain. Taking nourishment fairly well. Brandy, 2 oz. in 24 hours.

September 20th. Very quiet, occasionally moaning and lifting his hand to his head. No antifebrin given.

September 22nd. Temperature at morning visit 102° , pulse 140, respirations 28. Antifebrin, $1\frac{1}{2}$ grs., given, and the temperature at 1:45 p.m. found to be $97^{\circ}6'$, pulse 112, respirations 24, rising, however, at the evening visit to $101^{\circ}4'$, pulse 148, respirations 24. No medicine was given, and the temperature, taken again at 11:15 p.m., was found to be $100^{\circ}4'$.

From this date patient gradually improved, and on September 30th his temperature, morning and evening, was $97^{\circ}8'$. He slowly became convalescent, and was shown as discharged from hospital on October 20th, the 47th day of the disease.

In this case, beyond temporarily lowering the temperature, the effects of the antifebrin were slight, perspiration being induced and the pulse somewhat lessened in frequency. The head symptoms were not appreciably affected.

Mrs. K., age 20, a case of enteric fever without complications, but with a decided tendency towards very high temperature, ran its course in 30 days. Case 7.
Enteric fever

On September 27th, the eighth day of the disease, antifebrin, 10 grs., were first given, and continued in varying doses until October 14th.

On September 28th she was given antifebrin, 10 grs., at 7 a.m. Temperature at morning visit was $97^{\circ}8'$. At 1.30 p.m. patient had an attack of shivering, followed by a feeling of heat, and copious perspiration. Temperature at 6 p.m. was 105° . Antifebrin, 10 grs., given, and her temperature next morning, September 29th, found to be 103° , falling in the evening after another dose of antifebrin to $97^{\circ}4'$.

September 30th. Morning temperature $101^{\circ}2'$, pulse 96. Given antifebrin, 10 grs., at 10.45 a.m. after taking her temperature. Patient stated that she felt cool until 3.15 p.m., when she commenced to shiver. At 5.30 p.m. her temperature was 104° , pulse 108, rather small. Patient still complaining of feeling cold. Pupils normal. At 9 p.m. she felt burning hot, unbearably so, and took antifebrin, 10 grs., on her own responsibility; after this she perspired freely for three hours, and felt quite comfortable for the rest of the night. Slept well after she ceased to perspire.

In this case the antifebrin appeared to be decidedly beneficial, each dose being followed by free perspiration and a feeling of coolness and comfort.

Boy E. C., age 7, also a case of uncomplicated enteric fever, with a tendency towards hyperpyrexia. In this case antifebrin was given for a considerable time in varying doses. Case 8.
Enteric fever.

On October 1st, antifebrin, $3\frac{1}{2}$ grs., given at noon and repeated at 4 p.m., reduced the temperature from $104^{\circ}4'$ to 96° .

On October 5th, antifebrin, 4 grs., having been given at 7 a.m., the temperature at 11.15 a.m. was 96° , rising however, at 6 p.m., to 105° . Antifebrin, 4 grs., again being given, the temperature fell to normal at 9.30 p.m., rising on the following morning (11 a.m.) to $103^{\circ}6'$. Grs. 4 of the drug given at 11.15 a.m. seemed to have no effect as the evening temperature was $102^{\circ}8'$, falling on the morning of October 7th to $98^{\circ}6'$, after another 4-gr. dose of antifebrin at 7 a.m.

From the evening of October 7th to the evening of the 11th antifebrin, 2 grs., only were given morning and evening, with good results, the temperature going up to 102° , on its being omitted on the morning of October 12th, falling again on its administration.

In this case the powders caused very slight diaphoresis, and that chiefly about the head. Pupils appeared dilated equally. Pulse becoming slower, strong and full. Patient was said to feel drowsy after taking a powder, and to twitch the muscles of his face while sleeping.

Boy, B. M., age 6. Enteric fever running its course in 23 days.

Case 9.
Enteric fever.

In this case also antifebrin was given continuously, first in doses of 4 grs., afterwards in doses of 2 grs., morning and evening. As will be seen from the chart the temperature appeared to be well controlled by the antifebrin, never rising so high as 103° after first commencing its use.

This boy, after each powder, perspired freely for about two hours, and stated that he thought they made him drowsy.

Case 10.
Enteric fever.

Child, W. E., age 4. Enteric fever, uncomplicated, under observation from September 30th to October 17th.

On the evening of October 6th the temperature was 104.4°, and on the morning of October 7th (antifebrin, 2 grs., having been given at 7 a.m.) it was 96°, rising again to 103° on the evening of October 8th. From this time 1-gr. doses appeared to be sufficient to prevent any excessive rise of temperature.

On the mornings of October 6th and 7th, the temperature having fallen to below 96°, the child appeared cold with blue lips, and pulse scarcely to be felt. This condition, however, very shortly passed away.

Remarks.

Antifebrin or acetanilide is prepared by heating aniline and glacial acetic acid together in a flask fitted with an inverted condenser for 48 hours, then distilled, when the acetanilide is obtained in an impure state, but may be purified by recrystallisation from benzol or boiling water. So prepared it is obtained as an odourless crystalline powder, sparingly soluble in cold water. One part dissolving in 189 parts, but readily soluble in alcohol, from which it is not precipitated by the addition of water.

It may be very conveniently given suspended in milk or water, as it has no taste, and leaves in the mouth only a slight burning sensation. Children will take it in a little milk without the slightest difficulty, and patients to whom it has been administered for a considerable time do not show any dislike to it.

In the cases reported, milk was the vehicle used.

The action of the drug in reducing temperature is very marked, and it fails in very few cases, those chiefly adults; in children it apparently never fails. At the same time no bad results are noticed. It does not cause any cerebral disturbance; in adults the brain appearing to be cleared, and the patient invariably expressing himself as feeling very much better. In the case of children, a slight inclination for sleep appears to be produced.

In none of the cases reported was vomiting caused, and in one case only rigors resulted from its use. As a rule, the temperature begins to fall in about an hour, and continues to fall for three or four hours longer, the patient perspiring freely for an uncertain time, and the pulse becoming less frequent. The temperature then gradually rises again. In some of the cases also the number of respirations appeared to be lessened, and the breathing certainly became quieter. In no case was any irritation of the urinary passages produced.

In two cases (not recorded) one, pneumonia (*a*), and another of simple continued fever, antifebrin was administered with starch, per rectum, but was, however, not retained. In another case, that of a man suffering from tubercle of the lung, and who had been for a considerable time taking small doses of antifebrin, 15 grs., with starch, 1 oz. given per rectum, appeared to have the same effect as 5 grs. taken by the mouth; the effect namely of preventing an evening rise of temperature.

Recent experiments carried out in Paris seem to show a reduction in the number of red blood corpuscles produced by the repeated use of antifebrin.

In two of the cases treated at this station marked anæmia resulted, which, however, speedily improved upon the administration of preparations of iron.

I am of opinion that in this drug, given either in one large dose followed by smaller ones, or in repeated small doses, we have a powerful means of controlling temperature in febrile cases, and that its use would be extremely beneficial in tropical and sub-tropical climates, more particularly in the treatment of the hyperpyrexial form of sunstroke.

It might possibly also be given with benefit during the earlier stages of yellow fever, and, combined with quinine, might be tried in malarial paroxysmal fevers.

It has not as yet been found practicable to prepare a solution of antifebrin for hypodermic injection.

APPENDIX No. IV.

A REPORT ON A YEAR'S SURGICAL WORK IN INDIA.

By Surgeon G. WINSOR ROBINSON, Medical Staff.

In the regulations for the examination of surgeons for promotion it is laid down that the officer is to furnish a report on any subject of a practical professional character. The subjects of practical professional significance which must have been brought home to the mind of every surgeon of five years' standing are so numerous that no reasonable candidate can complain of an insufficiency of working material, and the only possible difficulty which can arise in his choice of subject is that of an *embarras de richesses*. The etiology of enteric fever, the dieting of patients, and a thousand and one subjects of a similar nature crowd into his brain, and, indeed, the powers of that viscus must be as much exercised in the choice of subject-matter as in the actual writing of the report. On reflection it has occurred to me to submit a report on a year's surgical work which fell to my lot whilst performing the duties of civil surgeon, Muttra, N.W.P., India, in the year 1885, thinking that my examiners may prefer a report, however sketchy and imperfect, on work actually done, rather than a more or less theoretical essay on one of the multitude of subjects of far greater professional interest.

The operations performed by me during the year in question were as follows :—

Nature of Operation.	Number.	Result.		
		Success-ful.	Failed.	Died.
Cataract extractions - " " " " "	223	241	52	0
Iridectomies - " " " " "	144	130	14	0
Lithotomies - " " " " "	13	12	0	1
Amputation of thigh - " " " " "	1	1	0	0
" " leg - " " " " "	2	2	0	0
" " foot (Syme's) - " " " " "	1	1	0	0
" " upper arm - " " " " "	2	2	0	0
" " forearm - " " " " "	2	2	0	0
Removal of breast - " " " " "	2	2	0	0
Excision of elbow - " " " " "	1	1	0	0
Removal of tumours - " " " " "	7	7	0	0
Artificial nose operations - " " " " "	2	2	0	0
Removal of eye-ball - " " " " "	1	1	0	0
Hare-lip operations - " " " " "	2	2	0	0
Removal of epithelioma (tongue) - " " " " "	1	1	0	0
Tenotomy ham-string tendons - " " " " "	2	2	0	0
Dissection of deep cicatrices - " " " " "	2	2	0	0
Total - " " " " "	478	411	66	1

Cataracts.

With regard to the cataract operations, I had been struck, whilst acting temporarily as principal of the Medical School at Agra in 1884, by the large number of cases of suppuration of the globe after cataract extraction which occurred there, and on talking the matter over with Surgeon-Major S. E. Maunsell, Medical Staff, that officer very kindly instructed me in the manner in which he was in the habit of performing cataract extractions antiseptically, and this method I adopted in all my cases. At the time of the operation all the instruments were kept in a shallow tray containing a solution of carbolic acid (1 in 80), and the patient's eye and lids and the operator's hands were always well and repeatedly washed in a similar solution. The extractions were all carried out in the following manner. The pupils having been well dilated with atropine, the eyelid retractor adjusted, and the conjunctiva held by a pair of broad-pointed toothed forceps, an incision involving the upper third of the cornea was made with a narrow Graefe's knife exactly in the corneo-sclerotic junction. If the iris prolapsed through the wound with the gush of aqueous it was taken up with the iridectomy forceps and a small piece at the outer angle snipped off with the iridectomy scissors. If it did not prolapse the Tyrrell's hook was used instead of the forceps. The capsule was next lacerated with the curette, and it was usually found that a slight laceration was sufficient for the easy removal of the lens, and that, if a too free tearing was indulged in, capsule matter generally remained to be removed after the extraction of the lens. In some of the cases an endeavour was made to nick the capsule by a touch of the knife as it was pushed over it in the preliminary incision, and thus obviate the necessity of using the curette; but, in practising this, it was found necessary to turn the edge of the knife somewhat, in order to effect a sufficient laceration, and as a consequence, though the knives used were the narrowest bladed ones manufactured, there was frequently a too early escape of the aqueous. The extraction of the lens was effected by gentle pressure of the left forefinger on the globe, the thumb and second finger resting on the patient's cheek. The pressure of the finger in this manner can be regulated to a nicety far exceeding that attained by the use of any instrument, such as the ordinary vulcanite scoop. Whilst the pressure was being made with the forefinger on the globe the lens was assisted in its exit by a Taylor's vectis.

Any capsule-matter which remained after the extraction of the lens was worked towards, and out of, the incision wound by means of small pieces of lint tightly rolled and soaked in a saturated solution of boracic acid, this solution, not only acting as an antiseptic, but imparting to the lint a certain amount of grip on the cornea, and readily inopping up masses of capsule-matter after their exit from the wound. In a very few cases the vectis had to be introduced into the anterior chamber to remove pieces of capsule.

The lens and its capsule having been removed, the edges of the wound were placed in accurate apposition by gently wiping them over with the boracic acid lint, and a few grains of finely-powdered iodoform were sprinkled over the globe. The lids were then closed and a pad of lint and cotton wool soaked in the boracic acid lotion, firmly bandaged over. Opening for inspection took place on the fifth or sixth day, unless there were evidences of anything untoward having occurred, in which case it was done earlier. If pain was complained of, and there was œdema of the lids, chemosis, &c., warm belladonna applications, belladonna inunctions, blisterings, and, in some cases, calomel and liq. hydrarg. perchlor. were had recourse to. Chloroform was administered in all the cases except six, and in these cocaine was used. A Savory and Moore's capsule was moistened in the carbolic lotion and placed in the eye 10 minutes before the commencement of the operation. These capsules answered well in all the cases in which they were used, but in no instance did they seem to thoroughly anæsthetise the iris, the patient invariably wincing when the iridectomy was made. I should certainly have used the cocaine far more freely but for an accident to the phial of capsules.

The results of the operations for cataract are, I am aware, far from brilliant, but the patients on whom they were performed were for the

most part ill-nourished coolie men and women, who were obstinately averse to any preliminary preparation, who expected to be operated on immediately they presented themselves at the dispensary, whose one cry was, "How many days am I to be kept in hospital?" and who completely baffled the vigilance of the subordinate medical staff in their persistence in tampering with their dressings. A great many of the failures were due to the early opening of the bandages by the patients themselves, and the rest to the ordinary causes, hæmorrhage, iritis, suppuration, &c. I regret that I am unable to give *in extenso* the exact results of the operations, the degree of vision obtained, &c., but my time during the year in which they were performed was too fully occupied to admit of my taking full notes of my cases, and I consequently have to give the results in the brief manner in which they are noted in the official records.

Bad as the results of these cataract extractions seem to be, I am afraid they would have been even worse but for the scrupulous carrying out of an antiseptic surgery. I am confident that by a strict adherence to the method detailed above many of those vexatious failures, in which suppuration takes place within the globe without any apparent reason, were avoided. In no case did the few grains of iodoform cause any conjunctivitis or other signs of irritation; indeed, I have used it in large quantities as a local application to the eye in cases of gonorrhœal ophthalmia, with the best of results.

Iridectomies.

The iridectomies were for the most part performed on account of leucomata. In some of the cases the opacities were very large, and in many there were extensive synechiæ. All cases were, however, attempted in which there seemed to be the slightest chance of letting in any light on to the retina, and the results were far from discouraging. The same antiseptic precautions were taken as in the case of the cataracts. A narrow, linear, Graefe's knife was used for the incision, which was generally a tolerably free one, and the Tyrell's hook was used in preference to the iridectomy forceps, as being more delicate. In many cases the iris was firmly adherent at its pupillary margin, and was gently dragged away with the hook, and a small piece removed with the iridectomy scissors, with the best of results. Four of the iridectomies were performed for a glaucomatous condition of eye, and in all these immediate relief was afforded.

Lithotomies.

The lithotomies were all performed by the left lateral method, and were successful in all but one case, an enfeebled old man aged 60, who had suffered for many years from the presence of two calculi (weighing together 1 oz. 7 drs.) in his bladder. He had, in addition, chronic bronchitis, and was in a very low, asthenic condition. As his sufferings were very acute, I decided, by an operation, to give him his one remaining chance. He died asphyxiated on the eighth day after the operation, the wound at the time of death looking fairly healthy, and urine being passed readily *per urethram*. Below are noted the ages, weights of stones, &c. of the cases operated upon :—

Age.	Weight of Calculus.	Nature of Calculus.	Result.
28	18 grs. -	Uric acid -	Cured.
60	1 oz. 7 drs. -	Uric acid, coat of phosphates -	Died.
32	38 grs. -	Uric acid -	Cured.
16	10 drs. -	Oxalate of lime -	"
35	1 oz. 3 drs. -	Phosphatic -	"
12	61 grs. -	Oxalate of lime -	"
3	14 grs. -	" -	"
18	3 drs. -	Uric acid -	"
4	2½ drs. -	Oxalate of lime -	"
5	1 dr. 10 grs. -	" -	"
7	1 dr. 6 grs. -	" -	"
26	1 oz. 1 dr. -	Uric acid -	"
18	1 oz. -	" -	"

Amputations.

The case of amputation of the thigh was that of a woman aged 38 years, who had been injured by the explosion of some firework shells. The right leg was completely shattered, and the tibia was fractured into the knee joint, which was freely laid open. There were, in addition, extensive burns of the second and third degrees about the chest, abdomen, and right arm. The case afforded interest with regard to the time of the operation. The woman was seen by me immediately after the accident, but was in such a low condition from shock that it was impossible to operate. After a lapse of 4½ hours, by dint of the free administration of stimulants, she had so far rallied as to admit of an amputation, which was accordingly done through the lower third of the thigh, by the long anterior and short posterior flap method. The woman had high traumatic fever, and was in a very precarious condition for many days, but eventually recovered with a useful stump. On the fifth day after the operation this woman was removed by easy stages in a dholi, from Bindrahan to Muttra, a distance of six miles.

One of the amputations of the leg was performed on the same evening as the thigh amputation quoted above, and both were done in conjunction with Surgeon-Major A. Anderson, Medical Staff. The case was the result of the same explosion of shells. The patient, a man aged about 45, had his right foot and lower leg shattered, and both the anterior and the posterior tibial arteries were lacerated. He had also burns of the second and third degrees about the face, chest, and right hand and forearm. The amputation was performed about one hour after the accident, immediately below the knee joint, by the long anterior and short posterior flap method. The man made a good and uninterrupted recovery.

The other amputation of the leg was performed for a man aged 28 years, who had an enormous ulcer involving the front lower half of the left leg. The ulcer was of 14 years' standing, had a sloughy floor, and thickened adherent edges, and the foot was in a condition of solid œdema. A similar amputation was made to the last one noted, immediately below the knee joint, with the result of a good serviceable stump, and a marked improvement in the man's weight and general health.

The Syme's amputation was performed with a satisfactory result for a youth aged 17 years, on account of extensive caries of the tarsal bones.

Both amputations of the upper arm were performed by the circular method on account of moist gangrene of the arm and hand, caused by a too tight application of bamboo splints for fracture of the humerus, by a native hakim. Both made good recoveries.

One of the amputations of the forearm was performed on a girl aged six years for caries of the carpus, which had involved the lower articular ends of both radius and ulna, the styloid process of the latter bone being necrosed and protruding through the skin. An anterior flap was made from without inwards as close above the infected parts as possible, and a posterior one of about the same length made by transfixion.

The other forearm amputation was done in a similar manner for a man aged 36 years, who had just had his left hand shattered by the bursting of a gun. In both cases the results were satisfactory.

Removal of Breast.

The subjects of the excision of the breasts were both elderly females suffering from scirrhus. In both a free removal was made by the usual elliptical incisions, and in one case two or three large infiltrated glands were also dissected out from the axilla. The wounds in both cases healed firmly, and the patients were then lost sight of.

Excision of Elbow.

The patient who underwent the excision of the elbow was a woman aged about 30, who had a healthy, full-blooded appearance, but who had two cicatrices on the neck, which were evidently the result of strumous ulceration

of the glands, in her youth. Her right elbow was firmly ankylosed, and the arm was fixed in a perfectly straight position. This condition had been brought about by suppuration in the elbow joint 18 years previously, and there were the cicatrices resulting from two or three former sinuses at the posterior aspect of the joint. A long, straight incision was made in the median line behind the joint, and the articular surfaces were, with some difficulty, dissected out and removed by the saw. The wound healed soundly, and, when seen six months after the operation, the woman had discarded the use of a hinge splint with which she had been provided, was able to get her right hand to her mouth without the help of the left, and, though the arm was still very weak, she said she could feel it getting stronger every day.

Tumours.

The tumours removed were various. Four were large fibrous tumours in different parts of the body. One was a sarcomatous tumour removed from the shoulder of a boy aged 12 years, and two were lipomata. One of the latter, the size of a small orange, was dissected out from beneath the fibres of the latissimus dorsi of a woman aged 19 years, and the other, the size of a cocoa-nut was removed from the buttocks of a woman aged 35 years.

Restorations of Nose.

The restorations of the nose were both effected by the Indian operation, the flaps being dissected from the forehead. In each instance the patient was a young healthy woman, who had been unfaithful to her husband, and who had consequently suffered the loss of the entire soft parts of the nose by the sweep of a razor wielded by the hand of the infuriated spouse. Both succeeded well, though in one instance reactionary hæmorrhage threatened destruction to the newly-made nasal organ. Free arterial bleeding took place on the second day after operation from the bridge of the nose immediately under the pedicle, and it became a nice point of surgery to decide what measures should be taken to arrest this, as pressure over the pedicle or the opening up of the flap with the view of tying the spouting vessel, would have been alike fatal to all hopes of a subsequent vitality. Fortunately the knotty point was decided by mother Nature, as the hæmorrhage, after going on by fits and starts for nearly two days, suddenly ceased and did not recur.

Removal of Eyeball.

The enucleation of the eyeball was performed on a youth, aged four years, for a glioma, which was ulcerating through the outer ocular coverings. There was no sign of recurrence three months after the operation.

Epithelioma of Tongue.

The epithelioma of the tongue was removed by the knife, the hæmorrhage, which was free, being arrested by the actual cautery.

Hare-Lip.—Tenotomy.

The hare-lip operations and the tenotomies were performed in the usual way, and presented no features of special interest.

Dissection of Cicatrices.

The dissections of cicatrices were both performed on account of distortion of the arm, the result of old burns. One case was somewhat interesting. It was that of a man aged 22 years, who had suffered severe burns of the right upper arm and chest when six years old. Whilst the granulating process was going on, the arm and chest had been kept in apposition, and as a result the arm was fixed closely to the side by a thick, rigid, cicatricial web from the axilla down to within an inch of the elbow joint. There was free hæmorrhage

from several vessels during the dissection, which had to be carried deeply into the axilla. The wound healed kindly, and the patient was able to place his hand on the top of his head with ease.

All the above operations, with the exception of the ophthalmic ones, were performed under a spray of bichloride of mercury solution (1 grain in 2,000 minims), and in no instance was there the slightest evidence of mercurial irritation. The dressings used were carbolic oiled lint (1 in 40), lint soaked in a saturated solution of boracic acid, and carbolised tow. All vessels were either twisted or tied with carbolised catgut, and the sutures used were fine silver wire or catgut.

In conclusion, I would add that this report is simply intended to be a brief history of a year's surgical work in India, and lays no claim to being of any special clinical value. The work was done whilst I was in charge of a gaol and was actively employed in military duties with a regiment newly arrived from England, during an exceptionally unhealthy year, and it was an impossibility for me to pay a sufficient number of visits to the native hospital to take the temperatures and other observations necessary for full clinical notes.

APPENDIX No. V.

CASE OF CEREBRO-SPINAL FEVER.

By Surgeon H. C. KIRKPATRICK, M.D., Medical Staff.

No. 2,280, Private F. B., East Kent Regiment, aged $17\frac{1}{2}$, service $\frac{1}{2}$ year, was admitted into hospital at Canterbury on the 27th April 1887 in a state of extreme collapse, being almost pulseless, and complaining of intense pain at the back of the head, and of constant bilious vomiting. The bowels acted freely, and the urine was highly coloured. He was suspected of having partaken of some unwholesome food.

Treatment.—A hypodermic injection of ether was administered, which had the desired effect of rousing the heart's action; also a mixture containing sub-nitrate of bismuth to allay vomiting. Poultices and mustard sinapisms were applied over the hepatic and epigastric regions, and hot-water bottles to feet and legs.

Previous History.—On the 18th April, one week before his admission into hospital, I passed him as a militia recruit, he being then in perfect health. On his admission he stated that he belonged to the Isle of Sheppey, and was one of 11 children, all the family living in a four-roomed house, and from his description I concluded that the rooms were of moderate dimensions. He also stated that he attributed his illness to cold; that he took ill suddenly; that from the day he took off his own clothes and put on his uniform he "always shivered on parade," the N.E. winds being prevalent, and very cold. His occupation previous to enlistment was that of a grocer's indoor assistant. His mother subsequently visited him, and stated that he had always been a dull boy at school, and that some few years previously he had suffered from an attack of ague.

There was no overcrowding in the barrack room.

April 29th. The following observations were made on the 29th April:—Bilious diarrhoea with great tenesmus, delirium of a low muttering form, herpes on mouth and upper lip, great retraction of the abdominal wall (the recti muscles being hard and standing out very prominently); vomiting ceased.

There is diplopia; the pupils are at one time dilated in the one eye and again in the other; sometimes they are contracted in the same way, and are always irregular.

The eyeballs are very prominent, with a nasty mucous discharge from the conjunctivæ.

There is pain in both eyes, with right internal strabismus, and a purpuric eruption on his feet and legs; pain still present at back of head. The urine contains albumen.

He answers questions in a semi-rational manner, but only after he has been spoken to in a loud voice. There is great restlessness and insomnia.

Treatment.—Stimulants, head shaved, and ice applied.

April 30th. Lies in a listless way, and much as above mentioned. He has a very nasty smell from his body. Case diagnosed as one of cerebro-spinal fever.

Treatment.—Iodide and bromide of potassium and tincture of digitalis. The stimulants and ice continued as above.

May 1st. No change of note occurred during the first four days, except that the petechiæ disappeared, and several bullous patches about an inch in diameter appeared on several parts of the body.

He has shown a tendency to bed sores, and has been placed on an air bed.

May 4th. He is semi-conscious, there are constant spasms of the muscles of the face and extremities; the right side of the face being more affected than the left, both masseter muscles firmly contracted. Opisthotonos is marked, his head being thrown back, and when moved it always turns towards the left side.

May 8th. Head and back of neck blistered (not with cantharides), takes his nourishment well, pulse excessively weak.

Brandy and digitalis increased, and iodide and bromide diminished.

May 12th. It is noticed to-day for the first time that he has lost power over his sphincters, both fæces and urine being passed involuntarily, the latter being highly ammoniacal; his breath, too, giving off the ammoniacal odour.

May 15th. Losing flesh rapidly; bed sores spreading. There is total paralysis of the tongue and deafness of the right ear (from which there is no discharge), noticed to-day for the first time. For the last two or three days he seemed more conscious, and took all his food, &c. well.

May 19th. There is right facial paralysis with right hemiplegia, but no absence of patellar or superficial reflex in either leg.

There was some hyperæsthesia present in right leg. When the skin of right leg was pinched he moaned very much, his face indicated that he was suffering pain, and when the left leg was pinched he simply moved it.

There has been defective deglutition, but that has disappeared.

He has constant priapism, and total abolition of power over sphincters. The strong ammoniacal odour has disappeared.

The urine is slightly acid, contains no albumen, but a large quantity of phosphates.

Large purpuric spots have appeared on various parts of the body.

The hemiplegia remained until death; but the patellar as well as the superficial reflex disappeared from right side; the priapism ceasing about same time.

The left pupil was almost always much more dilated than the right, and both were irregular. The temperature of the paralysed side was almost always a little higher than the other side. During the last four days he had a discharge (resembling pus) from the left ear.

He never appeared to lose the sense of taste.

During the last fortnight, on several occasions, the right hand and foot had very feeble circulation, became quite blue and congested, and only recovered after the application of warmth and friction, but towards the end this disappeared.

The right arm and leg wasted much more than the left, and his worst bed-sore was over the left great trochanter.

At the end he had occasional attacks of dyspnoea, and frequently, during attempts at deglutition, food and drink were forcibly ejected.

He slept badly from the beginning, even when under the influence of bromide of potassium. He was never violently delirious, but moaned frequently, and he was often semi-conscious.

Throughout his illness, after the first diarrhoea, he was extremely constipated.

On the 4th June his temperature went up to 106.2°, when he died at 7 p.m.

The immediate cause of death was hyper-pyrexia, from paralysis of the heat centre. His urine was examined a few hours before death, and found free from albumen.

His treatment throughout has been varied, supporting diet, with cardiac stimulants, alteratives, absorbents, and nervine sedatives.

He took his nourishment well, up to a few days before his death.

The temperature chart is attached.

Post-mortem Appearances Sixteen Hours after Death.

Post-mortem lividity well marked, body extremely emaciated, purple stains about an inch long scattered over the body and limbs. Membranes of the

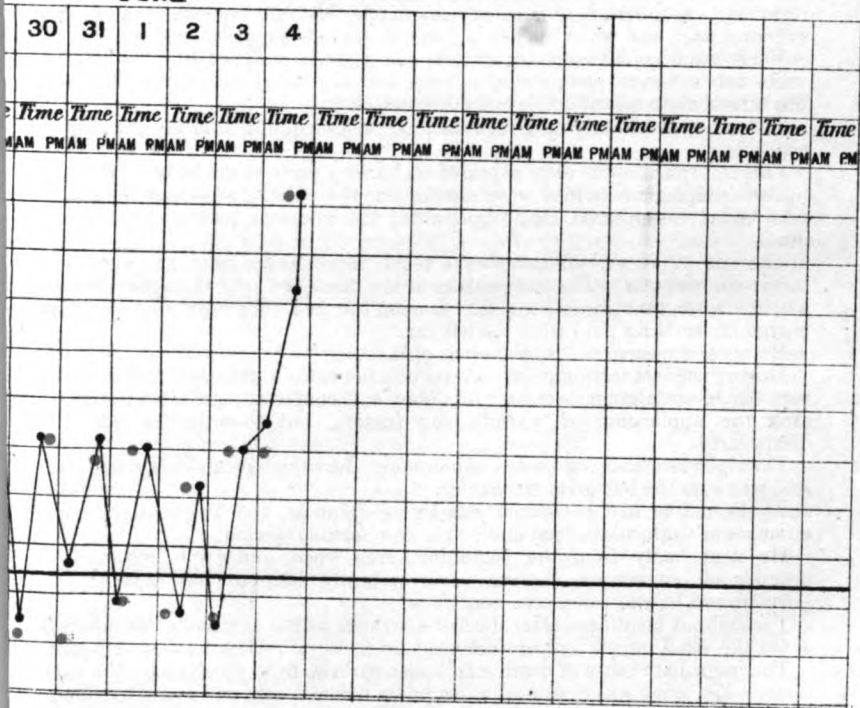
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2280.

Disease. Cerebro Spinal Fever.

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brain congested, convolutions flattened, patches of yellow lymph over the central part of the margins of the longitudinal fissure, and on base of brain. The pia-mater covering in the fourth ventricle and locus perforatus posticus thickened, firmly adherent, and covered with yellow lymph. Base of left temporo-sphenoidal lobe softened, but of natural colour.

Dura mater nowhere adherent to brain. Lateral ventricles much distended with clear serum. Fornix posteriorly soft and almost diffuent.

Choroid plexuses in places covered with yellow lymph; the subjacent parts of both optic thalami softened; corpora striata darker in colour than natural, but not softened.

There was a considerable amount of turbid serum between the membranes, and also in the spinal canal.

The grey substance of the cerebrum appeared darker than natural, and there had been some inflammation of it; the white substance was slightly injected.

Cerebellum softened, its upper surface being covered with yellow lymph.

The fourth ventricle was full of firm yellow lymph and the floor of this ventricle was softened, this being most marked on the left side, the colour being natural.

The posterior surface of spinal cord, between the cord and its membranes, was covered with a thick deposit of yellow lymph, the substance of the cord being extremely soft. The membranes of the cord were dark brown in colour, and very firm.

Spinal canal filled with turbid serum.

No tubercles were apparent on the membranes of the brain, spinal cord, lungs, or mesentery, nor was there any gross lesion other than the softening to account for the unilateral paralysis, or for the discharge from the left ear, the internal ear being normal.

About two inches of the spinal cord and its membranes, from the upper dorsal region, were removed for subsequent microscopical examination. It was found impossible to obtain a satisfactory section of the cord, owing to its extremely softened state. Various methods of hardening were adopted, but all proved unsuccessful. It was ascertained, however, from such sections as were obtained, that the meninges were much thickened by the exudation of leucocytes, and the formation of fibrous tissue; they were also much increased in vascularity. The nerve fibres of the cord were much degenerated, their myelin being broken up, and their structure blurred and indistinct.

The degeneration could not be localised to any one tract of the cord, and the whole was more or less infiltrated with cells.

Remarks.—This sporadic case is a typical one of the epidemic form. It was diagnosed on the third morning after admission, and was of primary origin (did not extend from the ears).

Although this case was isolated, having a ward in hospital to itself, I have failed to discover any fact showing this disease to be either infectious or contagious.

Etiology.—I consider this case as one undoubtedly caused by cold.

The complete change from an indoor occupation to barrack life, where in the first two or three weeks during drill a great deal of standing is necessary, exposed, as in this case, to piercing cold winds, is, in my opinion, sufficient cause, and especially so in the absence of all other supposed causes.

In the Appendix to the Army Medical Report for 1866 many cases are recorded, and since the publication of that report this disease has become more easily recognised and better known.

Strumpell, in his recent work, states that no less than 216 deaths from this disease were reported in Boston in 1873.

I am indebted to Mr. A. A. Bowlby, Demonstrator of Surgical Pathology, St. Bartholomew's Hospital, for the trouble he took in trying to obtain microscopical appearances of the cord.

APPENDIX No. VI.

A REPORT ON HILL DIARRHŒA.

By Surgeon D. WARDROP, M.B., Medical Staff.

Among the various diseases peculiar to a tropical climate, in which diarrhœa is a prominent symptom, there is one to which the word is applied as expressing a distinct disease. In cholera, dysentery, enteric fever, and other diseases, diarrhœa is the characteristic symptom, but it is only a symptom. In the lesion described below it is the name given to the disease.

The army medical officer will probably first meet with it while serving in an Indian hill station, and his early attempts at treatment will very likely not meet with success, although, by the characteristic evacuations, it will at once be recognised as the so-called "hill diarrhœa" or diarrhœa alba of the older writers. The name is to a certain extent misapplied, for it would lead one to suppose that it was a form of diarrhœa peculiar to the hills. This is not the case. Hill diarrhœa may be met with throughout the low-lying Indian plains, although it is undoubtedly much more prevalent in the hills.

The disease has been known and, to a certain extent, written about for many years. Ranald Martin in 1856, in common with Dr. Matthew Baillie and others, looked upon it as a very serious lesion. The latter of these writers went so far as to say that it was "almost constantly fatal," and that if the characteristic white purging was once fairly established "it was hardly ever radically removed, although it might occasionally be for some time suspended." Both of these writers, however, wrote chiefly concerning broken-down Indian invalids and not of the disease as met with in the present day, for, although through inattention, bad treatment, or a very much undermined constitution, it may undoubtedly degenerate into the condition described by Baillie, it is far from the usual course of events. Provided the patient will carry out his instructions—a very difficult matter in this disease—and there is no untoward condition, the disease is perfectly curable. Hill diarrhœa is more common in men than women, but this can easily be accounted for by the comparatively slight exposure the latter undergo to climatic influences. In children it is met with, though rare. In 127 cases noted by me the distribution was as follows:—

Men.	Women.	Children.
119	7	1

Here there is a marked point of difference from the lesion described by Manson and Van de Berg under the name of "Sprue," which appears chiefly to affect women. Although there is a great similarity in the symptomology of hill diarrhœa and sprue, there are also various points of difference, and this is one.

The disease although met with in America, China, the Malay Peninsula, and most tropical countries, has its chief centre in the hill stations of the Himalayas. Some of these seem to be more affected than others. In the Army Medical Department reports of early years mention is made of it from time to time. Surgeon Ogilvie mentions that "hill diarrhœa is unusual at Mount Aboo, except at the beginning of the rains." (Sanitary Reports for 1859.) Surgeon-Major Stewart in 1862 wrote of Landour, that "when the rains set in slight attacks of diarrhœa are common." Assistant-Surgeon Reade, of the Rifle Brigade, also mentions the frequent occurrence of hill

diarrhoea at Murree during the same year. Many other military surgeons mention this disease, and from their reports it would appear that the chief hill stations affected are the Simla group, while Darjeeling and Naini Tal are said not to exhibit a constant tendency to this affection, although by no means entirely free from it. A writer of some years back describes Landour as being almost exempt from attacks of diarrhoea, but the statements must be received with caution, for Chakrata, a station on the same range of hills some 15 miles off, has a bad reputation for hill diarrhoea, and, from my own experience, deservedly so. During one rainy season, out of a strength of 1,000 men quartered there, over 200 admissions were noted for this disease, that is to say 20 per cent. of the entire strength were the subjects of diarrhoea. The disease is probably to be contracted at any hill station in India, or at any place in the Indian hills, for, provided that there is a considerable rain-fall, the more bleak and exposed the place, the greater the risk of, *ceteris paribus*, contracting the lesion.

Etiology.—Diarrhoea of any kind is usually a symptom, not a distinct disease; it is consequently difficult to assign it a distinct place in nosology. The excessive secretion may be an effort of nature to throw off some poison or irritating substance, or it may be due to some local lesion, which is demonstrated on the post-mortem table. In the case of hill diarrhoea it is neither. It is a disease *per se*. The causes assigned for it are various. Malaria was for a long time, and is still thought by many, to be the chief cause. The water supply has been blamed; the presence in it of finely-divided mica being assigned as the cause of an epidemic at Dharamsala. The food supply has been attacked, especially the milk and “bazaar supplies.” Latterly the *Anguillula Stercoralis* has been found in the intestines and evacuations of those suffering from hill diarrhoea, and has been supposed to have an etiological connexion. There is, however, no proof of this. A sudden chill acting upon a predisposed condition of the liver is, by many authorities, put forward as the prominent cause. These are the chief factors in the etiology, but it is only the first and last that call for special comment. During an epidemic, using the word in its general sense, that occurred at Chakrata in 1885 the waters were one and all completely analysed and found to be of excellent quality; the food was also regularly and carefully examined, and no trace of impurity could be detected. Putting aside, then, water and food as causes of this form of diarrhoea, we have malaria and a sudden hepatic congestion as the two exciting factors of white diarrhoea. Were malaria the true cause of the disease the probabilities are very great that its area would be very much more widely spread. As before stated it is not a common disease in India except in some of the hill stations and is of rare occurrence even in very malarious districts where agues, &c., are of great frequency. The theory is adduced that if hill diarrhoea is not of malarial origin, but simply due to an hepatic congestion, why should it almost invariably be met with in tropical countries, especially those where malarial influence is rife? This is undoubtedly an argument in favour of the malarial virus, or, perhaps, I should say, organism, being considered a prime agent in the etiology; but one must remember that in tropical countries the hepatic condition is not such as it is in temperate climes. The effects of a chill in India, even after a short residence in the plains, is very different from a similar accident in England. Of the 127 cases collected by me only 36 had suffered from previous malarial disease; most of these cases were men of a regiment which marched to the hills in May, and who had lately been undergoing considerable exposure in the plains and only arrived at their hill station three weeks before the rains broke. The constitutions of these men had been undermined by a prolonged period of marching and living under canvas in hot weather, their hepatic systems, so to speak, were all more or less congested, and the sudden change from a hot, dry weather to a bitterly cold and wet climate caused the great prevalence of the disease. The more one sees of this affection the more the conviction forces itself that it is brought about by a chill; a sudden chill acting directly upon the liver. The season of the year at which it almost invariably makes its appearance is during the early part of the rainy season, the time when there are bitterly cold, damp days, and the time of all others that the soldier, fresh from service in the plains with his liver more or less congested, is most prone to contract any

disease that may be induced by cold or exposure. Among notes of many cases I can only find seven in which the disease attacked women, which is in itself a striking argument that the disease is the result of a chill, for the exposure that the soldier's wife undergoes in India is practically *nil*. Two of these cases were in officers' wives, who undoubtedly take more exercise and expose themselves to greater risks and danger of chills than the wives of private soldiers. In no one case of the women attacked was there any previous history of malaria. That a constitution undermined by malarial attacks, and with probably the malarial virus already present, is not more subject to a seizure of this form of diarrhoea than a perfectly healthy individual I certainly am not prepared to admit, but that the disease has its origin in malaria I do not for a moment believe. Martin, in his work on the "Influences of Tropical Climates," says that he has frequently seen cases of this form of diarrhoea in persons who had never suffered from any form of Indian disease. He also lays great stress upon its frequent occurrence in persons going suddenly to the hills after marching in the heat of the plains, and also states that it is sometimes preceded by an attack of acute jaundice and "by long-continued discharges of pure bile, which would appear to have exhausted the functions of the liver." He believed it to be the result of suspension of the functional powers of the liver, due to sudden hepatic congestion, and treated it accordingly.

Two other possible causes of hill diarrhoea, viz., the presence of some, as yet undiscovered, organism or extractive have not been discussed. That one or other, or both, of these causes may exert a powerful influence over this form of diarrhoea is far from improbable, but as yet it can only be a matter of speculation. A close microscopical and chemical examination of the earlier stages of the disease would be most interesting.

Morbid Anatomy.—Owing to the comparatively small amount of necropsies held in cases of death from "hill diarrhoea" the morbid appearances and anatomy are not well understood. The liver has been found to be increased in size in some cases, in others diminished. Cases are recorded where it was found to be of a greyish colour, the structure soft and friable, and on section bloodless except where veins were divided. This would point to hepatic anæmia. The gall bladder is generally empty. An extreme thinning of the intestines is a common condition, but is not always present. The following are the usual post-mortem appearances in a case of death from this disease:—

There is great emaciation of the whole body, with probably more or less general anasarca. Serous effusions of the pleural and pericardial sacs are sometimes, but not always, found. The heart is pale and deficient in muscular tone. The liver is usually enlarged, soft, and friable, but in some cases is smaller than normal.

The intestines, the mesentery, and the omentum are all thinned and wasted, while the mesenteric glands are enlarged.

These lesions would only exist where the disease had been running a course of extreme chronicity. In the cases usually met with, where it is only of a few weeks' standing, the probable morbid appearances are those of catarrhal inflammation of the intestinal tract with congestion of the liver. In very chronic cases there is doubtless some considerable alteration of the blood, causing a depravation of all the secretions and excretions of the body. Should death be the result of supervening dysentery the post-mortem reveals the characteristic lesions of that disease.

Symptoms.—The symptoms of hill diarrhoea are very characteristic, and are not likely to be confounded with those of any other disease. A typical case will present the following appearances:—The patient, who will probably have lately been residing in the plains and only recently arrived at the hills, will first notice a slight fulness about the abdomen after his early breakfast, which passes off after the usual matutinal evacuation. The time of the year at which this will be noticed will invariably be during the dull, damp weather of the rains. The fulness about the abdomen will get more marked and, should the patient notice, the stools will get much larger and paler. The next symptom is pathognomonic, and in all the cases I have seen, where I could get a sensible history, it was never absent.

It is this: the patient wakes suddenly in the early morning with an uncontrollable desire to defecate. He rapidly passes an enormous quantity of pale fæces of the consistency and appearance of thick cream. After the defecatory act he is much relieved and probably, if he is a soldier, thinks no more about it. This phenomenon occurs every morning for three or four days, when, if still neglected, the symptoms come on rapidly. The evacuations become more frequent, one at least, after each meal; the fulness of the abdomen is always present, and does not disappear after the bowels are moved; the tongue is covered with a whitish, slimy, fur; the appetite, which up to the present is but little affected, becomes capricious, at times voracious, and the patient begins to feel really ill. As the disease progresses, the evacuations become thinner, curdy, and not quite so large; the tongue becomes dry and glazed with flattened papillæ; there is rapid loss of flesh, particularly about the face; the eyes are sunken; the pulse becomes weak and thready, and pains occur throughout the limbs. In addition to these symptoms there is one described by all the writers upon "sprue" as characteristic of that lesion, viz., an aphthous ulceration of the mouth and tongue. In my own cases this symptom was rarely present, and shows another point of difference between this disease and sprue. If, however, hill diarrhœa becomes chronic, the aphthous condition of the mouth noted is almost invariably present. Should at this stage the disease not be checked it will become chronic and a much more serious matter. Ranald Martin thus describes it at this period:—"The skin will generally be found dry, cool, and sometimes harsh to the touch, occasionally of a soft, velvety character, all indicating a diminished vitality. The state of the system, as already stated, is usually anæmic. There is much restlessness, the little sleep that is obtained being unrefreshing. The intestinal secretions are sometimes of the appearance and consistence of pea-soup, and at others serous or watery, or, as some patients describe them, like soap and water, or semi-fluid and yeast-like, with little or no colouring matter. The evacuations are generally voided without any pain. They are always copious and exhausting, especially during the night or the early morning. The urine in all the instances in which I have examined it contained oxalate of lime in greater or less quantity. The appetite is sometimes voracious, at others defective or capricious." This is a brief history of the usual symptoms of hill or white diarrhœa, which, as before stated, rarely becomes chronic except through neglect or great previous undermining of the constitution. Sometimes white diarrhœa will run on to dysentery, or rather dysentery will supervene upon a prior attack of the disease under discussion, and the causation of this is somewhat doubtful. Of the cases that I have had personal experience of, two took on dysenteric action. In one the attack was very slight, but the second was more severe, and is thus recorded in my note-book:—Private S—, Rifle Brigade, was admitted to hospital in July, 1885, at Chakrata suffering from hill diarrhœa. The man, a young, delicate soldier, on admission appeared to be the subject of a rather severe attack. His history was a typical one, beginning with the large creamy stools, which he had been more or less suffering from for nearly a fortnight. Four days after his admission he had a severe rigor, and on the fifth day he commenced voiding blood and mucus at frequent intervals. The temperature rose, the tongue rapidly became coated with a dry, brownish fur; the pulse was quick and wiry, and the face flushed and anxious. There was also pain and tenderness about the abdomen. Ipecac. was immediately given in 25 grain doses, and hot stupes applied to the abdominal parietes. The man made a rapid recovery, the white evacuations did not again appear, and he commenced to put on flesh almost at once. Here the ipecac. acted, as it always does, like a charm, curing not only the dysentery but the hill diarrhœa. The stage of improvement is marked by absence of the abdominal fulness, voracious appetite, and, very gradually by the return of bile to the fæces, which become solid many days before the biliary colour appears. Relapses due to errors in diet are common, but are not of long duration provided the error be detected and rectified. The usual course of hill diarrhœa when it is not neglected is one towards complete recovery in from two to six weeks. It is, however, dependent entirely upon treatment which it is now proposed to describe.

Treatment.—The treatment of hill diarrhœa, like that of many other diseases, is divided into two great methods: the prophylactic and the curative. Did we live in the ideal city of Hygeia, so graphically described by Dr. Richardson at the Sanitary Congress, there would be no hill diarrhœa, for our surroundings and our clothing would be such as to render all chills, all impure water supplies, and all fear of malarial influence impossible. As, however, there are no Hygeias in India, and the army medical officer does not find his sphere of work in such pleasant visions of the ideal, it remains to him to try his utmost to make his own immediate charge as near an approach to Dr. Richardson's city as circumstances will permit. Hill diarrhœa, like many other tropical diseases, is really the result, to a great measure, of insanitary proceedings. By the word insanitary it is not meant to allude to dirty surroundings, bad water, or any of what may be called the commoner meanings of the word, although, of course, such would greatly aggravate a tendency towards diarrhœa in any form; the word is used to denote proceedings other than in strict accordance with health, and a few of these are appended. One of the principal causes of chills is improper clothing; this is very marked among soldiers. How often do we see in the cold, damp days of the Himalayan rains the British soldier, fresh, perhaps, from a two or three months' sojourn in a down-country hospital for ague or hepatic disorder, amusing himself in khaki clothing. Orders may be, and are, issued to prevent this, but it seems to be the acme of happiness to the young soldier in the hills to clothe himself as lightly as possible, especially when he is going shooting or butterfly hunting, the time of all others when he should be clad in woollen garments. Old soldiers are in this respect much more amenable to reason; they have probably bought their experience.

The traveller proceeding from the plains to the hills should be most careful about his clothing, and should invariably wear flannel next his skin. At the beginning of the rains all soldiers should be enjoined to wear their cholera belts, and their officers should try and make them feel the folly of going about in cotton clothing during the damp and unhealthy season of the year. Was every man compelled to hand into store his khaki and white uniforms about the middle of June, it would save a good deal of bowel diseases. Another common cause among soldiers of chilling the system is the enormous draughts of cold water they indulge in while out on their many sporting expeditions in the valleys. If a man is perfectly healthy this does him but little harm comparatively; but the subjects of hill diarrhœa are not as a rule healthy men, and that a severe chill follows the ingestion of a large quantity of spring water in an overheated frame is not to be doubted. The indiscriminate use of baths is another cause, although in the hills this is not, perhaps, such a common cause among soldiers. Among young officers and civilians I believe the incautious use of cold baths to be a frequent source of disease.

To sum up, then, a young soldier going to the hills should wear flannel next his skin; he should entirely abjure the use of his cotton clothing; he should take his bath when not heated, and should not take it at all if in bad health, unless he has the means of getting a tepid one; he should avoid overheating himself as much as possible, and should never drink large draughts of cold water when in that state. Going down to the bottom of the hills in search of game—a frequent practice, the men remaining away two or three days at a time—should be strictly forbidden during the rains. Cholera belts should always be worn from the middle of June. If these rules be observed, attacks of hill diarrhœa will not be of frequent occurrence. Should, however, the disease have fastened itself upon the subject, what is the best way of getting rid of it? The main essentials are these: The patient should be rapidly placed in true hygienic conditions as regards clothing, warmth, humidity, and light. In the early stage it is not necessary to confine the patient to bed; in fact, in my experience it was rarely necessary to do so at all in the ordinary run of cases, for gentle exercise seems beneficial. Flannel clothing, if not worn, should be put on at once, a fire kept going in the room where the patient lives, and as much light as possible admitted. In this lesion, as in most tropical diseases, there is a good deal of nervous depression, and the improving influences of a bright room are marked. The next, and the most important, essential of the curative treatment is the diet. From the day the patient puts

himself into your hands until he is thoroughly cured he must make up his mind to give up all food worth eating. His diet at first must be an absolute milk one; where the disease was fully established it was my practice never even to allow a rusk. It is in this part of the treatment that the physician meets with the most determined opposition. In England, where the milk is perfect, a long course of it is far from pleasant; but in India, where the milk, although perfectly good, has often a very disagreeable flavour, it is most trying. As the cure proceeds the appetite gets rather voracious, and great self-denial must be practised. In hospital the treatment is easier, for, when well watched, it is difficult for the men to get anything but what they are ordered, although we occasionally traced relapses to the patients having eaten portions of diets not intended for them. In outside practice the case is different, and I have on record two instances where slight departures from the milk routine caused serious relapses. One was in the case of a lady who was almost well, and who, after repeatedly worrying me to let her eat solids, took the law into her own hands, and the next day bitterly regretted her indiscretion. The white creamy stools re-appeared, and the treatment had to be begun over again.

Milk then, and nothing but milk, should be the diet, and should be continued until the evacuations become quite solid; they will be still white, but formed. A little rice, sago, or corn-flour may then be added to the diet, with a rusk, and this continued for a few days longer. Beef tea or chicken broth may now be given at the mid-day meal, and a little weak tea or coffee added to the morning and evening ones. Should bile now gradually return to the fæces, a little chicken, eggs, or tender mutton may be taken and cautiously increased; but until convalescence is fairly established, and the rainy weather past, the patient must be careful to commit no indiscretion in diet.

As regards the use of stimulants, my experience is that in most cases they are not required, and I rarely ordered them. There are exceptional instances, where the anæmic symptoms are very marked and where the pulse is very small and weak, in which a little alcohol mixed with the milk does good. In these cases I found whisky a better stimulant than brandy.

We now come to the third, and what, in the patient's eyes, is the most important item of treatment—the drugs to be administered. Very many have been proposed; indeed, few have not; among them mercury during the surgeons of Martin's time reigned pre-eminent. Bael fruit has been strongly recommended for chronic cases, astringents of all sorts, and opium in various doses and preparations. All had, and have, their believers. In the year 1885, from June to August, a very large number of cases passed through my hands, and I had considerable opportunities of trying various forms of treatment. From the experience then gained I adopted a plan which seemed to give as good results as one could wish for, and, before I had treated many cases, entirely took the place of all other methods. The dietetic portion has been already alluded to; stimulants I never gave unless compelled to, and the medicinal treatment was as follows:—On first seeing the patient a castor oil draught was invariably ordered, about four drachms of oil in warm milk for an adult. The next thing was to place the patient under the influence of ipecac., and this was usually given in the form of powder, perfectly plain. The dose varied from $\frac{1}{2}$ gr. to 1 gr. every four or six hours, and was continued for a considerable period. Frequently nausea was produced, in which case the dose was slightly decreased for a time and afterwards pushed. About every fourth day a little castor oil was prescribed. Occasionally the diarrhœa proved very obstinate and resisted treatment, in which case a little dilute sulphuric acid and gentian mixture was substituted for two days when the ipecac. was again resorted to. As the stools decreased in number and showed signs of formation, the ipecacuan was stopped and a mineral acid and gentian mixture prescribed, which was continued until convalescence was fully established. In some cases the period between convalescence and the return of bile to the fæces is very prolonged, and here nitro-muriatic acid baths and Carlsbad salts are invaluable.

This is the form of treatment I have latterly invariably pursued, and it has certainly succeeded far better than the astringent method. I frequently tried the two plans side by side under similar conditions of diet, and the result was always in favour of the ipecacuan. Those treated with astringents complained

of great abdominal fulness, and on stopping the medicine the diarrhoea returned. The treatment of this form of diarrhoea when it becomes chronic is most unsatisfactory. Ranald Martin declared strongly by alterative doses of mercury. For my own part I have had but small experience, but a change of climate to England with mineral acids, chloride of ammonium, and gentian as the chief drugs, seems to hold out the best chance of a cure.

My apology for writing on the above subject is the fact that it is to me one of great interest. Hill diarrhoea is a disease that few modern writers do more than barely mention. Yet it is one from which hundreds yearly suffer. I regret not to have been able to throw any further light upon the causation of this remarkable lesion, which is to a great extent, still wrapped in mystery. That it has a distinct, specific, cause and origin of its own is more than probable, but that cause remains to be discovered. The difficulties attending scientific research in an Indian hill station are greater than the English pathologist in his perfect laboratory can perhaps understand. Until these are overcome we must wait for the true origin of "hill diarrhoea."

APPENDIX No. VII.

CASE OF MALIGNANT NEW GROWTH IN THE BRAIN.

By Surgeon-Major J. R. GREENHILL, F.R.C.S., Eng., Medical Staff.

Bombardier W. G.——, of the Royal Artillery, 21 years of age, and of two years' service, was admitted to hospital on the 10th June 1887, complaining of giddiness and continuous pain situated in the back of the head, from which he stated he had suffered for a considerable time. Though pale, he was well nourished; his eyeballs were prominent and presented a peculiar staring, vacant expression. Pupils were dilated, but there was no defect of vision. He had a slow, deliberate manner of speaking. Beyond the symptoms above mentioned there was nothing specially noticeable in his condition at this time. No history of syphilis was obtainable, but his medical history showed that in the previous June he had been admitted to hospital for dyspepsia, which was considered to be due to an error in diet. A few days later, while still in hospital, symptoms of inflammation of the membranes of the brain appeared, and he was re-admitted under this disease. The origin of the attack was thought to be probably due to exposure of the head to the sun. He remained under treatment three weeks, when he was discharged from hospital and proceeded on two months' sick furlough, but on his return on the 25th September he was again admitted to hospital, in consequence as the medical officer considered of his showing symptoms of dementia. He was accordingly kept under observation nearly a month, but the opinion first formed was not confirmed, and being considered capable of performing his duty as a soldier, he was discharged from hospital, and with the exception of 11 days in the following November, when he was under treatment for a contusion, the result of a slight accident while on duty, he continued to perform his duties with his battery until admitted in June of this year with the symptoms above recorded.

It may be mentioned here, that after the fatal termination of the case, the following statement was obtained from the man's mother:—Four years before he enlisted, when playing at cricket, he had an attack of sunstroke, which was succeeded after a short time by a copious and most offensive discharge from the nostrils, which lasted a considerable time, and after this, although a painter by trade, he became unable to distinguish colours. No history of cancer in his family existed.

On admission to hospital on 10th June 1887 he was given 10 grain doses of the iodide of potassium three times a day, but no change in his condition was observed. On the 21st June Surgeon E. M. Hassard, M.S., under whose medical care he then was, very carefully examined the eyes with the ophthalmoscope, but did not detect anything abnormal, and the man himself stated that his sight was perfectly good. His capability, however, of distinguishing colours does not appear to have been inquired into. No paresis of any set of nerves could be detected. No peculiarity of gait in walking was observable, and he could stand perfectly upright when his eyes were closed. There was no ankle clonus, but the patella tendon reflex appeared to be slightly exaggerated; this, however, was lost a short time later. On June 28th he had an attack of nausea and vomiting, and the pain in the head and giddiness were much complained of. Ten grains of the bromide of potassium were now given with five of the iodide three times a day. From this time no special change in his condition was noted until about three weeks later, when it was

observed that he at times muttered to himself, and his mind wandered a little, while his memory also became defective. He was unable to stand upright with his eyes closed, and he presented an ataxic appearance in his walk. He was subject likewise to occasional attacks of vomiting. On July 30th the medicine was discontinued, and the application of ice to his head was tried, but the disease appeared slowly to progress, and he was now unable to walk without assistance. When asleep his head was thrown back in a very marked manner. The bowels were very costive. On August 2nd he had a slight rigor, but no decided change occurred in his condition until the 29th of that month, when, on the morning of this day, after being out of bed, he was seized with hemiplegia of right side. Although apparently conscious there was complete loss of speech. The following day power in the leg slightly returned, and he could utter a few sounds, but no distinct word. When desired to put out his tongue he did so to the right, and the mouth was drawn to the left. The pupils, though dilated, acted under the influence of light. No anæsthesia was present. The power in the leg continued to improve, and in a week after the attack he was able to raise it a little. There was also some slight return of power in the hand and fingers, but this did not continue to improve. The power of speech however returned sufficiently to enable him to utter a few words, though he did this slowly and with difficulty. The mind was evidently greatly disordered. For some weeks he retained power over his bladder; then he began to pass his urine under him at night when asleep, but later he lost all power over the bladder, and his strength failed generally. He however took a fair amount of nourishment, consisting chiefly of milk and eggs. His bowels continued very costive, and were only moved with the aid of enemata. He was placed on a water bed soon after he was attacked with hemiplegia, and no sores of the back occurred. He sank very gradually, and died on the morning of the 7th December.

An examination of the body was made 26 hours after death. Rigor mortis was marked; body was well nourished; the blood vessels on the surface of the brain were much congested and a considerable amount of serous fluid was found at the base of the brain. On laying open the left lateral ventricle an oblong lobulated tumour was discovered, distending this cavity and extending under the corpus callosum into right lateral ventricle. On raising it, it at once came away from its attachment to the base of the left lateral ventricle, which implicated the corpus striatum and optic thalamus. The tumour on removal weighed 6½ oz., measured 4½ inches in length, 3½ in breadth, and 6½ in circumference. When cut it presented the usual appearance of medullary carcinoma, but was generally of a dark purple colour, and there were various small extravasations of blood into its substance. The consistence of the brain was firm generally, except the part to which the tumour was attached. The other organs of the body presented a healthy appearance.

APPENDIX No. VIII.

A CASE OF ABSCESS OF THE BRAIN (APHASIA).

By Surgeon G. A. WADE, F.R.C.S.I., Medical Staff.

December 7th, 1887.—Private D——, 1st Battalion Royal Irish Rifles, aged 29, was admitted to hospital at Gosport at 4.30 a.m. in a state of great collapse. Pulse 160, small, fluttering, and almost imperceptible. He was quite conscious and had no pain, but his mouth was drawn over to the left side, and the lines of expression were absent from the right half of his face. The tongue when protruded turned to the right. He was unable to speak or articulate beyond the word “no,” which was indistinct. The right half of his body was more or less paralysed, but he was able, with difficulty, to raise his arm about 3 inches off the bed, and had rather more power over his right leg. The sphincter ani was relaxed and fæces passed in bed. There was no dribbling of urine. Was put to bed between blankets, and hot bottles applied to his feet. Two ounces of brandy were administered by the mouth, owing to the extreme collapse.

Taking the symptoms with his youth (29 years), and the absolute suddenness of the attack, my diagnosis was embolism in the third, left, frontal convolution. Broca’s lobe.

When next seen at 10 a.m. he had recovered the use of his leg, and to a less extent of his arm. The face was not distorted and he was able to answer questions, though his articulation was thick and indistinct. Skin hot and perspiring.

December 7th, 6 p.m.—Paralysis and aphasia have completely passed off. Some fever. *Vide* temperature chart attached.

December 8th, 9 a.m.—Patient again extremely collapsed, apparently in articulo mortis. Slightly revived by brandy 3 ii. with hot bottles; this was followed in about an hour by a severe rigor, for which I administered a draught, containing 30 grs. of quinine, with much benefit, and without causing tinnitus, headache, or any other untoward symptoms. Perspired profusely.

6.30 p.m.—Has been slightly delirious, but can be roused, and answers questions intelligently.

December 9th.—Still slightly delirious. Has no symptoms or physical signs of any sort, with the exception of some bronchial râles in both lungs. As in spite of the brandy his heart still continues very weak and rapid, there being at times hardly any first sound, I ordered tinct. digitalis in 15m doses, which acted with very good effect, slowing and strengthening the heart’s action. Sweating considerably.

From the above date to December 16th he continued without any change, always slightly delirious and with high fever, but with no symptoms pointing to any particular organ.

December 16th.—Complained of pain below the liver in the region of the right kidney. I was not able to make out the kidney by palpation or percussion, and considered the pain due to the liver, which was much enlarged, as was also the spleen. As the man had been in Africa, I looked upon this as malarial and ordered the following mixture:—

R Liq. arsenicalis, m 15.
Quininæ sulphat., gr. 30.
Inf. calumbæ ad. 3vj.
3j. t.d.s.

with poultices over the liver, as the pain was very severe, and a couple of ounces mist. sennæ co. as he was constipated and never moved without medicine.

December 23rd.—Slight hæmoptysis, such as would be accounted for by the bronchitis. Pain in region of right nipple, but no friction sounds or other discoverable cause. From this time he got gradually worse, and died at 1.30 a.m. on December 26th.

During the whole period he was on milk diet with beef tea 0 ij. and brandy 3 ii. daily, and even this he did not always retain. Skin always moist and soft.

Temperature chart and post-mortem report attached.

POST-MORTEM REPORT (EXTRACT) FROM POST-MORTEM BOOK.

Admitted 7th December 1887. Died 26th December 1887. Post-mortem 38 hours after death. Body well nourished and presenting externally nothing worthy of note. On removing the calvarium slight evidence of meningitis was found over the surface of the right cerebral hemisphere, the dura mater being adherent to the brain in three small patches.

Brain; weight, 51½ ozs. Nothing abnormal in right side. In left frontal convolutions an encysted abscess (about as big as a walnut) containing greenish pus. Another similar but slightly larger abscess in the occipital lobe. The brain substance immediately around these abscesses was soft and diffuent.

In opening the thorax both lungs were adherent to the chest walls. Right lung; weight, 32 ozs. Adherent to chest wall and diaphragm. Upper lobe numerous little caseous yellow patches. No vomicae. Left lung; weight, 34½ ozs. Upper lobe adherent to chest wall. Evidence of bronchitis in both lungs.

Heart; weight, 12½ ozs. Pale and fatty. Slight disease of mitral valve, which was puckered and thick though competent. No vegetations. Antemortem clots in all the cavities. The pericardium was healthy, and contained several ounces of clear serum of post-mortem origin.

Liver; weight, 79 ozs. Adherent to diaphragm. To the naked eye healthy, with the exception of some slight pigmentation on section.

Gall bladder. Very small and thick walled; contained healthy bile, 1 oz.

Spleen; weight, 12½ ozs. Much enlarged, soft and very friable—in fact rotten, and of a peculiar pale, dirty, maroon colour, new to me. Contained some spots of pigment. Adherent to pancreas and colon.

Kidneys. Left. Weight, 12½ ozs. Three abscesses under the capsule, containing foetid green pus, the largest big as a filbert. The pelvis and medullary portions were healthy. Right kidney completely disorganised being merely one large sac of foetid green pus. The ureter was obstructed.

Other organs not examined.

REMARKS ON THE FOREGOING CASE.

The man's medical history sheet shows no admission for rheumatic fever. Three admissions only are shown, two for sprain and one for bronchitis.

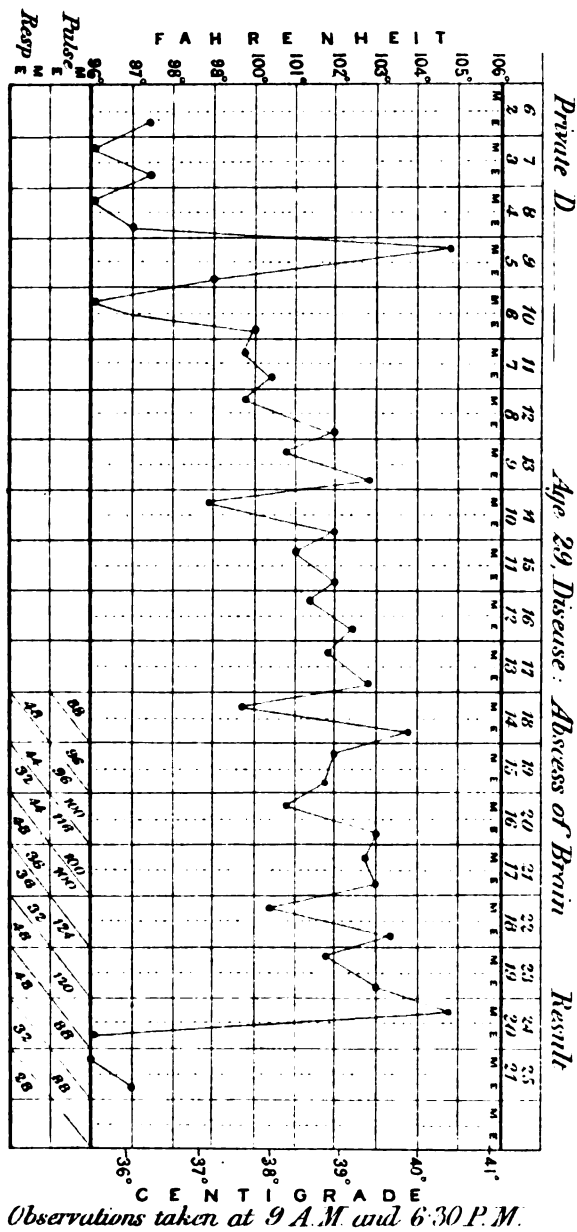
There was no evidence of ulcerative lesion about the mitral valve, and the endocardium was healthy.

Murmurs were audible on two occasions in the mitral area, but were very fugitive. They were probably anæmic.

The heart was always carefully watched, as I had for a time a suspicion that the case was one of ulcerative endocarditis, and was much disappointed at the result of the post-mortem examination.

There was nothing in the appearance of the spleen to suggest the idea that an embolus had originated there, and the appearance of the abscesses in the brain was also against it, as they were surrounded by strong capsules, so that on making a section of the brain the knife caught in the capsule and simply dragged the abscess *en masse* out of the surrounding semi-diffuent brain substance. I am inclined to look on the case as one of pyæmia rather than embolism, but it presents many features difficult to explain in either case.

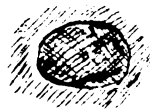
As there never were any kidney symptoms—œdema, anasarca, dry skin, hard pulse, &c.—and as the urine presented nothing abnormal in its appearance, it was not, I regret to say, tested.



Horizontal Section, seen from above.



Vertical Section from outer Surface of Brain.



The abscess in the frontal convolutions was in Broca's lobe, about half an inch from longitudinal fissure. It was slightly over 1 inch in diameter and the capsule was fully $\frac{1}{8}$ th of an inch thick. The surrounding softening extended about half an inch beyond the abscess capsule. It was not discoloured.

I have attempted in the accompanying diagram to show the positions of the two abscesses, both on horizontal and vertical sections. The lighter shaded portions show the surrounding softening.



APPENDIX No. IX.

ABSTRACTS OF CASES OF GLAUCOMA, OPERATION FOR VARICOCELE, AND FRACTURE OF SKULL.

By Surgeon J. R. FORREST, Medical Staff.

1. *Glaucoma*.—Private J. G., Depôt Norfolk Regiment, age 36, service 18 years, was admitted into the Station Hospital, Great Yarmouth, on 1st December 1887, with failing sight in both eyes. On ophthalmoscopic examination the fundus of both eyes was found more or less obscured by the hazy condition of the vitreous humour, the retinal veins were enlarged, and a large hæmorrhage was seen in the left fundus. There was no cupping of the disc in either eye. The ocular tension in both eyes was manifestly increased. There was no distinct vision with the right eye, and with the left eye he could not see any type at a greater distance than 1 foot.

The subjective symptoms complained of were: pain, flashes of light, dark spots and stars, and halo around a candle-light.

The patient had served for 13 years in India, and was admitted into hospital there on 10 occasions for ague (on one occasion with brow-ague). There is no history of syphilis. He has been twice in hospital at Great Yarmouth with ague. He was treated with quinine and iodide of potassium internally, with local applications of 2 per cent. solution of cocaine until 11th December, when it was determined to perform iridectomy in each eye, as the former treatment had been of no service, and his sight was failing from day to day.

Accordingly, on the above date, the patient being placed under chloroform, a large iridectomy was made in each eye. He was given m xxx. of liquor. morphinæ hydrochlor. in the evening, and he passed a good night. On the 15th there was a good deal of inflammation in the right eye, and iced water was applied. Cocain, 2 per cent. solution, was applied daily to both eyes. On 21st December, he could read Snellen's 20 foot type at 1 foot with the left eye, and at $1\frac{1}{2}$ feet on 5th January 1888.

Iodide of potassium in gr. v. doses was given thrice daily from 25th December to 12th January.

On 20th February 1888 he could read Snellen's 20 foot type at 21 inches with the left eye, but there has been throughout little or no improvement in the sight of the right eye.

The fundus of the left eye is now normal, and that of the right eye appears also to be normal, although there is still considerable opacity of the vitreous in the right eye.

From the history of this case it appears probable that malnutrition and possibly reflex nervous influences connected with the brow-ague were the causes of the disease.

The advisability of iridectomy appears to be exemplified.

2. *Operation for Varicocele*.—Gunner W. A., Depôt, Eastern Division, Royal Artillery, age 21, service $\frac{1}{2}$, was admitted into the Station Hospital, Great Yarmouth, on 13th July 1887, with a large varicocele on the left side. Rest in bed and a suspensory bandage were tried, without avail, until 24th July, when it was determined to operate. Accordingly, on that day, the patient being placed under chloroform, an incision was made through the scrotum and coverings of the cord, and two silk ligatures were applied, each of them including the enlarged veins in a bunch. The ligatures were about two inches apart, and the intervening portion of veins was excised. The ends of the ligatures were cut off short. One ligature came away with the dressing on 3rd August, and the other on 9th August. The wound was dressed with corrosive sublimate solution (1 in 2,000) and iodoform ointment.

The patient was discharged to duty on 19th August 1887 perfectly cured, and has remained well up to the present date.

In cutting the ligatures off short I hoped that the very small amount of silk would become encapsuled and lead to no further trouble. In future, however, I should be inclined either to use carbolised catgut ligatures, or to leave the ends of the ligatures hanging out of the wound until the ligatures separated.

3. *Fracture of the Skull.*—Private E. T., 4th Battalion Norfolk Regiment, previously to enlistment had followed the occupation of a shepherd. In the middle of December 1886 a heavy barn-door had swung back and knocked him on the forehead. He did not lose his senses, but he worked no more that day. Next day, however, he returned to work, and continued uninterruptedly at work until his enlistment in the middle of March 1887. He then joined the Dépôt and went through his preliminary drill and training until 10th May 1887, when he reported himself sick at the Station Hospital, Great Yarmouth. On that day he presented a fluctuating swelling about the size of half an orange over the lower and anterior portion of the left parietal bone. A scab had existed here since the reception of the injury, and a copious flow of laudable pus commenced from the situation of the scab on 9th May. There was another small opening discharging pus just above the middle of the left zygomatic arch. A depressed fracture could be distinctly felt beneath the centre of the base of the tumour. His temperature was 99·2 on the evening of admission. The next morning (11th) an incision 3 inches in length was made over the middle of the tumour, and the wound was washed out with carbolic lotion. A sequestrum of bone $\frac{3}{4}$ inch long by half that in width was discovered and removed, and cerebral pulsation was seen through an opening in the cranium $\frac{3}{4}$ inch in diameter. No other sequestra could be discovered, and the one found was much eroded. The wound was dressed with carbolic lotion, and 3 i.ss of white mixture was administered internally. Another small sequestrum was removed on the evening of 12th May.

On the morning of the 13th May his temperature was normal. The dressings were soaked with discharge, with no evidence of decomposition. Bowels opened twice after castor oil. Wound looking healthy, and discharge of laudable pus somewhat less. On this evening, temperature rose to 104·8. He had had no rigor, but he vomited during the day. A probe passed downwards within the cranium at the seat of injury appeared to alight on carious bone.

On the 16th the note says that the wound was filling up by healthy granulations. The wound was dressed with solution of perchloride of mercury (1 in 2,000).

On the morning of the 18th May the patient's temperature was normal, and remained so until his discharge from hospital.

On 23rd June the note says that the wound was showing little disposition to fill up by granulation. The wound was stuffed with lint for some days, but this appeared to lead to disintegration of the granulations, and was therefore discontinued.

Iodoform dressings were applied for a week at the beginning of July, but did not succeed so well as the perchloride, which latter was therefore re-applied.

This militiaman having completed his time at the dépôt was discharged to his home on the 21st July 1887. There then remained a circular aperture in the cranium about the size of a florin. The patient was in perfect health.

This case is chiefly interesting as showing the length of time that may elapse before a patient with a severe head-injury may manifest any symptoms.

APPENDIX No. X.

LIST OF OPERATIONS PERFORMED AT THE ROYAL VICTORIA HOSPITAL, NETLEY, DURING THE YEAR 1887, WITH SHORT ABSTRACTS OF THE MOST IMPORTANT CASES.

By BRIGADE-SURGEON C. H. Y. GODWIN, Medical Staff, Assistant Professor of Military Surgery.

Operations.	Number of Cases.	Diseases.	Results.				Remarks.
			Completely successful.	Partially successful.	Failed.	Died.	
LOWER EXTREMITY.							
Sharp end of bone removed.	1	Badly united fracture of femur.	1	—	—	—	
Amputation of thigh, left, in lower third.	1	Acute spreading gangrene.	1	—	—	—	
Removal of end of femur.	1	Conical stump with protrusion of bone after an amputation in the field.	1	—	—	—	
Amputation of thigh, lower third.	1	Strumous disease of knee.	1	—	—	—	
Sinus in heel opened up and os calcis thoroughly scraped out.	1	Strumous disease of os calcis.	1	—	—	—	
Sinuses laid open and sequestrum removed.	1	Necrosis of trochanter major.	1	—	—	—	
UPPER EXTREMITY.							
Amputation of fingers.	2	Diseased joint and ankylosis.	2	—	—	—	
Sinus opened up in upper arm and bullet removed.	1	Gunshot injury .	1	—	—	—	
Sinus of arm opened up and sequestrum removed.	2	Do. -	1	1	—	—	
Resection of wrist joint.	1	Caries of bones of carpus.	1	—	—	—	Lister's method.
Resection of head of humerus.	1	Gunshot injury -	1	—	—	—	
Adhesions broken down under ether.	2	Ankylosis of wrist	—	2	—	—	

Operations.	Number of Cases.	Diseases.	Results.				Remarks.
			Completely successful.	Partially successful.	Failed.	Died.	
HEAD AND FACE.							
Removal of triangular portion of skin.	2	Entropion	2	—	—	—	1 upper eyelid, 1 lower eyelid.
Foreign bodies removed from orbit.	2	From one a piece of glass, from the other a piece of lead, both caused by explosions.	2	—	—	—	
Sinus leading into frontal cells enlarged and carious bone removed.	1	Caries of frontal bone following erysipelas.	—	1	—	—	
Aneurism, traumatic, by ligature.	1	Aneurism of temporal artery.	1	—	—	—	
RECTUM.							
By ligature	2	Internal piles	2	—	—	—	
By nitric acid	2	Do.	—	2	—	—	
By clamp and cautery.	2	Do.	2	—	—	—	
Sinus divided up	1	Fistula in ano	1	—	—	—	
Division of base of ulcer.	1	Ulcer of rectum and fissure.	1	—	—	—	
GENITO-URINARY.							
Perineal section	2	Urinary fistula	1	1	—	—	
THORAX.							
Incision between 8th and 9th ribs.	1	Abscess of liver	1	—	—	—	Aspiration was first used, then a free incision.
VEINS.							
One treated by needles and one by injection of carbolic acid.	2	Varix	2	—	—	—	
Totals	34		26	8	—	—	

In submitting the return of operations for the year 1887 I append a short account of the more important and interesting cases.

Sergeant B——, aged 34, 2nd Hants Regiment, was wounded on the 17th July 1886 in Burmah, when out with a detachment of men for the purpose of attacking dacoits. He was struck by three bullets, one passed through the skin over the right deltoid muscle, a second passed through the outer side of the left leg just below the knee but without injuring the bone, the third struck the right thigh in front and a little to the outer side of the middle line, passing backwards and a little outwards, and, striking the femur, splintered it. Efforts were made to save the limb, but after seven weeks he became so ill that it was considered advisable to amputate, which was accordingly done on the 30th August 1886 at the junction of the middle with the upper third of the thigh. He recovered rapidly after the operation. The note, however, states that on the 23rd November when at Poonamallee a piece of bone about an inch in length was removed from the wound, and on the 20th February 1887 another piece was again removed. After this he was invalided to England, and arrived at Netley on the 28th March 1887.

Conical stump; removal of end of bone.

On his admission he was in a fairly good state of health, both the flesh wounds were soundly healed, but the stump was conical in shape, the muscles having retracted and left the end of the bone covered by skin only projecting about two inches. The amputation wound had quite healed except at one small opening corresponding to the under surface of the end of the bone, on probing which rough and denuded bone could be felt.

On the 10th May, ether having been administered, an incision was made on the outer side of the stump through the old scar, and the soft parts having been withdrawn from the bone, about two inches of unhealthy bone were removed by the saw. The wound healed up quickly, leaving a very short but well covered stump.

Private S—, aged 25, 2nd Dragoon Guards, was invalided from India on account of chronic synovitis of the left knee joint. He had never been very strong, and states that in January 1886, when carrying a sack of corn, he slipped and hurt his left knee, which continued stiff and painful for some months. In October of the same year he had to be sent home from India on account of it, and arrived at Netley on the 24th December 1886. On the way home the patient was much troubled with cough, wasting and night sweats. After his arrival he suffered at times greatly from the knee, but when it was firmly fixed in a plaster of Paris splint, he was able to get about very fairly. On July the 12th a small abscess formed on the outer side of the knee joint which was opened, but on the following day it was evident that pus had made its way into the joint. The knee was hot to the touch, extremely painful, and fluctuation could be detected. Chloroform having been given, the joint was freely opened out, all the pulpy tissue scraped away, and likewise all cheesy masses were removed, the joint was washed out, drainage tubes inserted, and the whole dressed with sal alembroth wool. He suffered very much after this from pain and constitutional disturbance, so much so that on the 21st July it was considered advisable to remove the limb by amputation through the lower third of the thigh. The operation was carried out by means of a long anterior flap of skin, short posterior one and circular division of the muscles. The operation wound healed fairly well, but the sinuses in the posterior flap continued to form, and have proved even up to date (February 1888) most difficult to heal, though the man has gained greatly both in appearance and weight, and now has no chest symptoms to complain about, but is able to be up and about, and on fine days to go out of doors.

Private W—, aged 36, Medical Staff Corps, employed as an orderly at the Lunatic Asylum, Netley, where he had been working for the past 2½ years, applied for admission into hospital on the 27th March 1887. He walked in with the assistance of two men, and gave the following account of himself. On the afternoon of the 24th March he had felt a pain in the instep of the left foot, had a rigor, and felt generally poorly. He continued to get worse, his foot became swollen, and he sought advice. He gave as a history that some years ago he contracted ague in the West Indies, and had been liable to attacks of it ever since. He was very abstemious in his habits, and could not account for his illness in any way. Some months ago a corn on the ball of the little toe had given him a good deal of trouble. He picked it with his finger nails, inflammation with slight suppuration followed, but this had long since quite healed, and he thought no more about it. On admission he looked gravely ill, his left foot was swollen, and over the metatarsal bone of the little toe a black slough was seen, through which a probe could be passed into a cavity extending to the plantar surface of the foot, on the skin, over which was plainly seen the indurated cuticle of a large corn. His temperature was 104·6, the pulse rapid, the tongue dry and brown, his expression of countenance anxious, and a foul smell came from the slough. The sinus was opened up and the cavity syringed out with iodine water, iodoform was sprinkled over the wounds, which were now dressed with sal alembroth wool. In the evening the dressings had to be changed, when the foot was found to be more swollen on the outer side, and the skin in parts when touched gave the crackling sound of emphysema in the cellular tissue. A free incision was made through the skin, when some dirty, fetid, purulent fluid escaped, but the mass of tissue looked black and dead. On the 28th March, temp. 101·6, tongue dry and brown, the skin over the sloughing cellular tissue had bullæ on it, the

Amputation in the lower third of the thigh.

Amputation through thigh for acute spreading gangrene.

smell was most offensive. Iodoform was freely used and the foot well washed with $\frac{1}{1000}$ sublimate solution, and sal alembroth wool re-applied. On the 29th more bullæ on the skin of the foot, the fifth metatarso phalangeal articulation was quite bare, the bones lying uncovered and black-looking. The œdema had extended up towards the external malleolus. On touching the outer ankle the same crackling feeling of emphysema was noticed, but the skin was in no sense brawny. Another incision was now made into the emphysematous patch, when the same dirty, stinking fluid escaped. 30th March, upon removing the dressings the œdema was found to have extended well above the ankle, and the same crackling could be felt under the skin; temp. 102, pulse 106. A vessel in the sole of the foot commenced to bleed, bullæ were found upon the skin of the lower half of the leg, the skin itself looked pale, felt tense, and the blue veins were very distinct in appearance. It was now quite evident that this was a case of acute spreading gangrene, where no line of demarcation was to be expected, and as the advance was rapid, it was determined to amputate through the thigh well above the knee-joint. This was done in the ordinary way by long anterior flap and short posterior flap of skin with circular division of the muscles. On dissecting up the posterior flap a line of gelatinous infiltration was seen. This was well scraped out, cut away, and a portion of skin removed, the wound was then closed in the usual manner after a thorough washing out with a sublimate solution. He was then conveyed to a fresh ward, and had everything new about him in the shape of clothing and bedding.

March 31; temp. 97, pulse 98: bowels moved three times; has had a most profuse sweat. April 1st: bowels moved three times. As some discharge was showing through, the dressings were changed, when the wound was seen to be quite normal. April 2nd; temp. 99.8, pulse 84: patient drowsy, some subsultus tendinum, inclined to pick the bedclothes, slept badly, urine passed involuntarily; the wound, however, looked well; there was no inflammation or tension. April 4th. Bowels opened eight times; wound has apparently united; skin somewhat blistered by the alembroth wool. He gradually improved until the 10th April, when the wound broke down, a gush of dirty, puriform fluid escaped, and it seemed as if all the connective tissue had been destroyed and cleared out, leaving the long upper flap lying loose over the end of the bone. However, from this time granulation set in, and he recovered with a very fair stump.

Examination of the Leg by Surgeon McGill, Asst. Professor of Pathology.

I examined the leg immediately after its removal from the body, 30th March 1887. Nearly the whole of the dorsum of the foot was in a state of moist gangrene. Parts of the soft tissues over the metatarsal bones had separated, but there was no line of demarcation limiting the destructive action. The whole of the outer side of the leg was tense and swollen, and presented several bullæ on its surface. Pressure caused pitting and a feeling of deep crackling. A dark sanious discharge trickled from the diseased portion of the foot; its odour was offensive to a degree. Incisions being made on the outer and under side of the leg; quantities of pus with a disagreeable odour poured out. Many parts of the muscular and subcutaneous tissues were yellow and jelly like, whilst some parts exhibited more advanced necrotic changes.

Pus and jelly-like degeneration were found on the under side of the leg as high up as the external condyle of the femur. The pus was evidently fast spreading up between the planes of muscles, regularly dissecting them from each other, and would have shortly aided in reducing them to masses of dead tissue, for the gangrenous action was advancing fast along the deep planes, though not so apparent on the cutaneous surface of the limb.

Inoculation of test tubes containing 5 per cent. sterile nutrient gelatine disclosed the presence in the pus of two distinct specimens of micro-organisms, viz.:—

a. *Streptococcus pyogenes*.

b. *Staphylococcus pyogenes albus*.

a being seen microscopically to exist as single cocci and also in chains; b as single cocci and zooglæiform masses.

Private H—, aged 25, 1st Lincolnshire Regiment, was invalided from India in March 1887, having suffered greatly from syphilis. He had also met

Excision of the wrist-joint by Lister's method.

with an accident in June 1886 by falling down a bank and injuring his right wrist. He soon after this noticed his wrist to be enlarging and to be painful. In September ulcers formed over the lower end of the ulna posteriorly and over the ball of the thumb anteriorly. In March 1887 a small piece of bone is said to have been removed from the posterior ulcer, which now was large and excavated. On the 23rd June 1887 he arrived at Netley, when he was out of health, and had scars of a syphilitic nature on different parts of his body. He had a large oval cicatrix over the posterior surface of the lower end of the radius $2\frac{1}{2}$ inches long by 1 inch broad; in the centre of this scar there was an irregular-shaped ulcer about the size of a florin, excavated and with pale, bluish-coloured overhanging edges, and on the thenar eminence he had another excavated, deep, irregular ulcer with the same kind of unhealthy overhanging edges, and in the centre a sinus leading down to unhealthy carious bone. The lower third of the ulna was considerably thickened and enlarged; the movement of the carpus was very limited. On the 17th July another ulcer formed over the front of the head of the ulna, from which a small piece of bone came away; bare bone was readily detected by means of a probe. On August 12th the note describes the wrist as considerably swollen, with numerous sinuses over trapezium and scaphoid bones, which lead down to diseased bone, as also do the sinuses over the head of the ulna. He was now advised to undergo an operation for the removal of the diseased bone, and, therefore, on the 16th August the wrist joint was excised by the method known as Lister's. The carpal bones were removed, the ends of the radius and ulna were sawn off, as also were the proximal ends of the metacarpal bones. The operation was a tedious one and took up much time; unfortunately, just at the end, it was observed that the radial artery had been pricked, so this vessel had to be tied above and below, and then cut through. The head of the ulna had been injured by the fall, and several of the small bones were diseased. The soft parts were now duly brought together and wrapped in sal alembroth wool, and then were placed upon a Lister's splint. The after progress of the case was very satisfactory, a daily movement of the fingers was commenced within the first week, and after the second week the movements were more extended. The wounds healed up quite soundly, and he has now good power of pronation and supination, and he can hold things between the thumb and fingers' tips, and is acquiring daily a useful hand.

Excision of the head of the humerus for gunshot injury.

Private B—, aged 25, 2nd Somerset Regiment, was invalided from Burma on account of a gunshot wound of the left shoulder, and arrived at Netley on the 23rd January 1887. He stated that in March 1886, when out skirmishing, a bullet struck his shoulder, entering about 3 inches below the prominent part of the left shoulder joint and, passing downward and inward, lodged. Repeated attempts were made to find it, but without success, a constant discharge came from the wound, and occasionally pieces of bone came away also. About a week before arriving at home a small abscess formed on the inner side of the arm which was opened, and through this opening, on the evening of his arrival at Netley, the bullet dropped out. He suffered a great deal of pain, which he described as spreading all over the region of the shoulder, backwards over the scapula, and in front upwards, as far as the clavicle, fresh abscesses continued to form; the arm was quite fixed, and he begun to suffer very decidedly from the constant pain and the drain from the sinuses, all of which led down to diseased bone. He was therefore recommended to undergo an operation. On the 30th August, ether having been administered, a long straight incision was made commencing between the coracoid process and acromion, the joint was found quite disorganised as the head of the humerus was firmly ankylosed to the glenoid cavity and required great force to disengage it, but after a severe effort it was forced out of the wound and sawn off well below the tuberosities; the wound was then washed out with a chloride of zinc solution; drainage tubes were inserted, and the upper part of the long wound was brought together by sutures. This united readily, and he was greatly relieved by the operation. The bullet which had lain so long hidden in his shoulder had originally lodged in the head of the bone, but without splitting it, and in course of time became loose and dropped out, leaving a large cavity with carious walls, which had been the cause of so much irritation.

As the weeks passed by the wound did not heal but formed fresh sinuses leading down to diseased bone, the pressure of which on the axillary plexus of nerves caused him constant suffering, and led him to wish to have the arm removed altogether. So on the 13th January 1888, the wound was re-opened and about 1½ inches of diseased bone were removed from the humerus; since then the wound has been quite healthy in appearance, and is giving every promise of recovery.

Private L—, aged 30, 1st East York Regiment, was invalided from Barbadoes in May 1887, and arrived at Netley on the 29th of that month. He states that the temporal arteries on either side of his head have always been large and distinct, also that his habits had not been strictly temperate.

Aneurism, traumatic, of the temporal artery.

On the 10th February 1887 he received a blow from a sugar-cane on the left side of his head, and after this he noticed a small filbert-shaped swelling commenced to form 1½ inches above the left zygoma; the vessels of the scalp became, he thought, more tortuous and he had strange noises in his head.

On admission the pulsation of the arteries of the body was very marked. The right temporal artery was enlarged and very tortuous. On the left side the left temporal artery from below the zygoma up to where it divides into the anterior and posterior branches was very much enlarged, tortuous, and sacculated. On the anterior temporal branch just 1½ inches from the superior external orbital angle was situated a filbert-shaped aneurism, in which a loud bruit could be heard; beyond it the vessels, both temporal and occipital, were considerably enlarged and very tortuous, forming almost a cirroid condition. The aneurism was increasing in size; it prevented him from wearing a hat, and gave rise to disturbing noises in the head; he was therefore anxious for something to be done. Accordingly, on the 9th July, ether having been given, the skin was divided over the efferent branch of the aneurismal artery, which was then tied in two places and cut across between the knots; the same proceeding was carried out with the afferent branch. All pulsation in the aneurism at once ceased, the wounds healed by first intention, all noises in the head ceased, the tumour became hard and gradually contracted in size, and he left the hospital on 22nd August apparently quite well, though the general enlarged condition of the vessels of the scalp remained. Soon after his discharge from the Army information was received that he had been again obliged to seek relief in a civil hospital for some cerebral symptoms, the particulars of which have not been received.

Captain A— B— had suffered from previous attacks of gonorrhœa, and after a fresh attack had, in January 1887, an attack of inflammation of the deeper portion of the urethra, resulting in abscess; this was opened and duly healed. In July a fresh abscess formed, which was also opened, but the sinus did not heal, and he began to notice urine passing through it at each attempt at micturition. His general health was at the time indifferent; he had no actual stricture, but the urethra was irritable, and he was therefore advised to take change. In September he sought admission into the hospital at Netley, when he was found to have an urinary fistula opening in the left buttock and running up to the membranous urethra. A No. 11 catheter could be passed, but the urethra bled easily and spasm was easily induced. The prostate gland was not enlarged, but the tissues in the neighbourhood were indurated, and pressure of the finger caused uneasiness, if not pain. It was attempted to cure the fistula by teaching him to pass a No. 8 catheter whenever he needed to pass water, so that no urine should overflow along the urethra itself. This was strictly carried out for six weeks, and it appeared to have been most successful, as all induration in the track of the sinus had disappeared and no urine came through the fistula, which seemed to have quite healed. But in the early part of November he experienced a sudden call to make water, and could not pass the catheter in time, and as the urine flowed he was conscious that some of it had entered the old sinus. This proved to be correct, a fresh abscess formed with a return of the urinary fistula. As this plan had failed an operation was proposed, and on the 14th December, ether having been given, a grooved staff was passed into the bladder, he was then placed in the lithotomy position and a perineal section made so as to reach the staff, the fistula was then explored and laid open into the wound, a Wheelhouse's gorget was then passed along the groove in the staff into the bladder, and by means of this a large drainage tube, with an india-rubber tube attached, was passed

Urinary fistula, perineal section

easily into the bladder and tied in its place. Owing to his position in the bed the urine did not run off easily through the tube, which had, therefore, to be removed, and the urine allowed to flow by the tube into the bed instead of, as was intended, by the rubber tube into a chamber underneath the bed. After five days the bladder became somewhat intolerant of the tube, it was therefore removed. The wound healed most favourably, and he left the hospital quite well on the 18th January 1888.

APPENDIX No. XI.

CASES OF EXCISION OF RIB FOR EMPYEMA, AND A CASE OF TRANSFUSION.

By Surgeon J. V. SALVAGE, M.D., Medical Staff.

1. *Excision of rib for Empyema.*—Two cases came under my treatment at the Herbert Hospital, Woolwich. They were both examples of empyema of the right side, occurring after a severe attack of acute pneumonia.

The excision of the rib was in each case preceded by the removal, by aspiration, of a considerable quantity of pus, which re-accumulated. Both men are at the present time (February 1888) at their duty.

The first man, Gr. J—, R.A., æt. 25, had been ill for a few days prior to the 12th February 1887, on which date he was admitted into hospital suffering from lobar pneumonia. The attack was a severe one, involving almost the whole of the right lung and a part of the left; it was accompanied by a certain amount of pleurisy, with effusion, on the right side. The inflammation of the lung was very slow in clearing up, but there was no corresponding improvement in his general condition; he remained very ill, and it seemed that the amount of fluid in the chest was increasing. Four weeks after admission his state had become very serious, the temperature ranging from over 100° F. in the morning to 103° in the evening. The pulse being 120 to 135, compressible and very dicrotic, respirations 30 to 44 per minute, he did not sleep without sedatives, he was restless, and at times delirious. It was decided to tap his chest, as a preliminary measure, and with a Dieulafoy's aspirator 13 ozs. of pus were removed; the pus was thick, of a slightly greenish yellow tint, and quite sweet. The immediate effect of this was a considerable improvement, which, however, lasted but a short time. There was a re-accumulation of the pus, attended by a return of the more serious symptoms, showing the necessity of immediate action. On 15th March 1887 (four days after the tapping) it was determined, in consultation with Brigade-Surgeon S. E. Maunsell and Surgeon-Major W. B. Allin, that a portion of rib should be excised, and free drainage established.

The patient having been put under chloroform, an incision, 3½ inches long, was made along the seventh rib, commencing anteriorly, 3 inches outside the nipple line. The tissues were divided down to the periosteum, which also was cut through and completely separated from the rib, of which a piece measuring 2½ inches was removed, after being divided with bone forceps. The periosteum was left adherent to the intact and thickened pleura. All the hæmorrhage was then stopped and an incision made along the full extent of the exposed 2½ inches of periosteum and pleura. About a quart of quite sweet pus escaped through this opening. Two pieces of drainage tube, each ½ inch in diameter and 4½ inches long, were then introduced through the wound and tied in. Dressings of boracic lint and wool were applied.

On the evening after the operation so much discharge had come through that the dressings had to be changed, and, for the first five days, the dressings were renewed daily, about 10 ozs. of pus escaping in the 24 hours; after this the amount slowly decreased.

A very gradual improvement in the general condition of the patient took place within a few days of the operation. Sixteen days after the operation the discharge had lessened so much that one of the tubes was left out, and four weeks afterwards he was first able to get out of bed for half an hour in the day. As the quantity of pus diminished the remaining drainage tube was from time to time shortened and replaced by others of smaller calibre, and in 10 weeks all discharge had stopped, and the wound had quite healed; the man was also able to remain up all day and get about the hospital.

Exactly four months after the excision of the rib he left the hospital to go on a month's sick furlough.

It is probable that the fluid effused into the chest during the course of the pneumonia was purulent almost from the first, and the very slow convalescence in this case was due to the very serious condition to which he had been reduced prior to the operation—a condition which rendered the general after treatment a matter of anxiety for some days—and I would add that in this and the following case the skill and very careful attention of Nursing Sister S. E. Oram did much to contribute to their recovery.

With the exception of two short intervals this man has been at his duty, including a course of riding drill, during the period of rather more than six months which has elapsed since his return from furlough.

The second case, Private M—, C. and T. C., æt. 23, came into hospital on 18th April 1887, having been ill for one day. He had a sharp attack of lobar pneumonia, involving the whole of the two lower lobes and the greater part of the upper lobe of the right side. On the fourth and fifth evenings his temperature went to 105° F., but on the eighth it fell to 100°·2, and for a day or two it seemed that he was going to make a speedy recovery. Unfortunately this favourable aspect did not continue, the dulness on the right side of the chest did not diminish, and *pari passu* with the subsidence of the pneumonic symptoms, those due to pleuritic effusion become prominent. The vocal resonance, and fremitus, and tactile fremitus completely disappeared, the pulse increased in frequency, and the temperature assumed a hectic character, rising to 102° F. and 103° in the evening, and falling to 99° in the morning. The appetite also began to fail.

On the evening of the 18th day of his illness he became suddenly much worse. I was sent for, and found him suffering from considerable dyspnoea, and with a feeble quick pulse; he had also had an attack of vomiting. It was decided to tap his chest at once, and with a Dieulafoy's aspirator rather more than a pint and a half of thick, yellowish, quite sweet pus was drawn off. The urgent symptoms at once abated, and he was very much better for the next few days; as in the former case, however, the improvement was only temporary; the pus re-accumulated, and the patient, already very weak, began to lose ground daily.

It was decided, in consultation with Deputy Surgeon-General Tulloch, Principal Medical Officer, and Surgeon-Major Powell, that the chest should be freely drained as in the previous case. On 14th May 1887, 11 days after the tapping, the patient was put under an anæsthetic, and 2 inches of the seventh rib were removed. During the operation his pulse became so bad that it was found necessary to replace the chloroform by ether, and to administer subcutaneous injections of brandy and ether. Only a small quantity of pus escaped when the pleura was opened, and the discharge was throughout much less than in the former case. The details of the operation were practically the same as on the first occasion. A drainage tube 6 inches long and $\frac{3}{4}$ inch in diameter was introduced and tied in. This was by degrees lessened in length and diameter; on the 25th day the tube was left out altogether, and on the 31st day the wound was quite healed. Alembroth gauze was at first used as a dressing in this case, but as it was found rather irritating to the skin, carbolic gauze was substituted.

On 8th July 1887, eight weeks after the excision, the man left the hospital for one month's furlough, after which he returned to his duty. During the seven months which have since elapsed he has been continuously at work without a day's absence. Both lungs are now acting well, and the breath sounds are good on the right side down to the line of the incision. He states that he is enjoying excellent health.

Both the operations were conducted with antiseptic precautions. The carbolic spray was used during the operations and at all subsequent dressings, until the drainage tubes were left out. The pus being quite sweet in both cases, I considered it better not to syringe out the pleural cavity either at the time of the excision or subsequently.

2. *Transfusion*.—Dr. G—, R.A., æt. 25, was invalided from India for dysentery, and was admitted into the Herbert Hospital, Woolwich, under Surgeon R. W. Wright, M.S., on 14th April 1887. The man was extremely anæmic and emaciated, and diarrhoea was persistent. He had a decided

scorbutic taint, as evidenced by swollen, easily bleeding gums, and large flabby tongue. In spite of dieting and medicinal treatment diarrhœa and melæna continued, and the patient grew weaker, until on 2nd May the radial pulse had become quite imperceptible, and the heart's action could only with difficulty be made out; the extremities were cold, and he was evidently at the point of death.

I was asked to perform transfusion by Surgeon Wright, who himself gave the blood, and subsequently assisted at the operation.

About 10 ounces of blood were received into a porcelain basin kept warm by being immersed in hot water. The fibrin was removed by means of a wire egg whisk, and the defibrinated blood, measuring about eight ounces, was injected into the left median basilic vein. An ordinary two ounce glass syringe, 3 inches of indiarubber tubing, and a small vulcanite nozzle, thoroughly cleaned and warmed, constituted the whole of the apparatus used for the injection. The patient began to rally after the first syringe-ful of blood had been injected, and almost immediately after the completion of the operation there was a vast improvement in his condition. The radial pulse became easily perceptible and the heart's action much stronger. The patient expressed himself as feeling much better. Unfortunately, however, the diarrhœa and melæna returned in a few hours, and the patient gradually sank and died the next day, 22 hours after the transfusion. Although the termination of this case was unhappy, the immediate result was eminently satisfactory, and again illustrates the unrivalled powers of transfusion as a stimulant, and the possibility of performing the operation without a complicated apparatus.

APPENDIX No. XII.

REPORT ON AN OUTBREAK OF PYTHOGENIC PNEUMONIA
OCCURRING AT RICHMOND BARRACKS, DUBLIN, 1884.

By SURGEON-MAJOR G. S. ROBINSON, 2nd Battalion Scots Guards.
Furnished in accordance with paragraph 4, Appendix No. 1, Medical Regulations.

I.—PRELIMINARY STATEMENT.

From September 1883 to September 1884 the 2nd Battalion Scots Guards, of which I was in medical charge, was quartered in the North Wing, Richmond Barracks, Dublin; the 1st East Kent (Bufs) Regiment occupying the South Wing.

The health of the troops (if we except the large amount of venereal disease usually prevalent in Dublin), was excellent till March 1884, when an epidemic suddenly appeared, of which the most striking features were rapid onset, acute febrile symptoms, and special liability to pleuro-pneumonia. It lasted throughout March, April, and May, when it entirely disappeared.

Though both battalions were attacked in the same manner, the Bufs had fewer cases. As, however, I have no record of their strength, I am unable to state whether their per-centage of sick was actually lower.

In the following Report I propose to discuss,—

- I.—The details of the attack as recorded by the different medical officers in charge of barracks and hospitals.
- II.—The nature of the epidemic and its probable origin.
- III.—Conclusions suggested by the evidence I have adduced.

NOMINAL ROLL OF CASES OF PNEUMONIA IN RICHMOND BARRACKS,
MARCH–MAY 1884.

No. of Case.	Regiment.	Rank.	Admitted.	Discharged.	Days under Treatment.	REMARKS OF COURT OF INQUIRY.
1	2 Bn. Scots Guards.	Dr. H. -	1884. 16th Jan. -	1884. 12th Feb. -	30	Mild case
2	"	Pte. McK.	21st Jan. -	5th March -	44	Severe "
3	"	" T. -	22nd Feb. -	10th March -	18	Very mild
4	2 Bn. Scots Guards.	Pte. C. -	11th March -	16th April -	37	Probably bronchitic.
5	"	" W.	12th March -	29th April -	49	Not well marked.
6	"	Corpl. C.	14th March -	18th March -	5	Died. Severe.

No. of Case.	Regiment.	Rank.	Admitted.	Discharged.	Days under Treatment.	REMARKS OF COURT OF INQUIRY.
7	2 Bn. Scots Guards.	Pte. C. -	1884. 14th March -	1884. 18th March -	(7)	Died. Probably secondary to some other affection.
8	"	" G. -	16th March -	16th April -	32	Liver affection with mild pneumonia.
9	"	" C. -	24th March -	23rd April -	37	Pleuro-pneumonia.
10	"	" M. -	26th March -	8th May -	44	Severe; probably due to septic influences.
11	"	" S. -	28th March -	29th April -	33	Doubtful.
12	"	" W. -	23th March -	1st May -	35	Pneumonia.
13	"	" S. -	4th April -	9th May -	36	Pneumonia.
14	"	" L. -	5th April -	16th May -	42	Pleuro-pneumonia.
15	"	" P. -	7th April -	14th June -	69	Severe pneumonia.
16	"	" R. -	10th April -	25th June -	77	Severe pneumonia.
17	"	" C. -	11th April -	29th April -	19	Pleuritic symptoms predominate.
18	"	" F. -	11th April -	23rd June -	74	Asthenic pneumonia.
19	"	" C. -	11th April -	24th May -	44	Mild pneumonia.
20	"	" N. -	15th April -	10th May -	26	Bronchitic.
21	"	" S. -	25th April -	15th July -	82	Severe pneumonia.
22	"	" L. -	1st May -	24th May -	24	Complicated by scarlet fever.
23	"	" B. -	1st May -	2nd June -	33	Mild pneumonia.
24	"	" P. -	3rd May -	24th May -	22	Pneumonia.
25	"	" C. -	4th May -	23rd May -	20	Doubtful.
26	"	" M. -	9th May -	24th May -	16	Doubtful.
27	"	" E. -	11th May -	10th June -	31	Pneumonia.
28	"	" J. -	12th May -	7th June -	27	Pleuro-pneumonia.
29	"	" J. -	13th May -	12th July -	61	Pleurisy.
30	"	" M. -	13th May -	24th May -	12	Pneumonia.
31	"	" B. -	18th May -	7th June -	21	—
32	1 Bn. East Kent.	Pte. B. -	15th March -	11th April -	28	Mild pneumonia.
33	"	" D. -	19th March -	22nd May -	65	Severe pneumonia.
34	"	" M. -	21st March -	16th April -	27	Died. Apparently septicaemia with secondary lung affection.
35	"	" J. -	31st March -	29th April -	30	Mild pneumonia.
36	"	" W. -	9th April -	23rd May -	45	Severe pneumonia.
37	"	" B. -	9th April -	12th April -	(4)	Died. Pneumonia appears to have been local manifestation of septicaemia.
38	"	" E. -	10th April -	29th May -	50	Severe pneumonia.
39	"	" C. -	17th April -	22nd May -	36	Mild pneumonia.
40	"	" C. -	22nd April -	16th June -	56	Enteric, with pneumonia.
41	"	" R. -	29th April -	In hospital -	—	Severe case, apparently septicaemia.
42	"	" H. -	4th May -	In hospital -	—	Pneumonia.
43	"	" P. -	12th May -	21st May 1884	10	Mild pneumonia.
44	"	" S. -	21st May -	In hospital -	—	Severe pneumonia.

Throughout this Report I propose excluding the first three cases as having occurred independently of the subsequent epidemic.

The result is then as follows :—

2nd Bn. Scots Guards (treated in Barrack Hospital)	28	2 deaths.
1st Bn. Buffs	5	1 "
" " (treated in Royal Infirmary)	8	1 "
Total	41	4 "

I.—DETAILS OF THE OUTBREAK.

On the previous page I give a roll of 41 cases occurring within three months and returned as pneumonia. They may almost be considered as two separate series; some of the men having been treated in Richmond Barrack Hospital and some at the Royal Infirmary. It will be found, nevertheless, that the results are very similar.

It is a singular coincidence that of the 33 cases treated in the former hospital, 11 were admitted in each month.

It is also observable that three out of the four fatal cases were admitted at the commencement of the outbreak; the fourth early in April.

Of these cases, Nos. 6 and 7, Corporal C— and Private C—, who were both admitted March 14th, died in five and seven days respectively, with acute lung affection. From that date till the end of the epidemic men were admitted, sometimes two or three a day and sometimes with intervals of three or four days. In all there was remarkable similarity of type, varying only in degree. Thus :—

A man falls out on morning parade and is brought to hospital in a state of semi-collapse. Temp. 104–106, P. 120. Vomiting, intense headache, congestion of eyes. Sharp pain in one side, increased on inspiration. Cough with or without expectoration. States that he was in usual health over night, but did not feel well when he got up. On examination of chest :—Slight dulness and harsh breathing at base of one lung. Subsequently :—

- (1.) *In severe cases.*—Lung symptoms further developed. Consolidation of the lung first affected almost complete; the other later on. Temp. persistently high, or, more frequently, with variations of several degrees, and rigors. Sputa identical with those of ordinary pneumonia. Vomiting obstinate. Patient stupid, but not generally delirious. Convalescence slowly arrived at, the lung symptoms slowly subsiding.
- (2.) *In abortive or mild cases.*—Consolidation of affected lung slight, the symptoms relapsing into those of catarrhal bronchitis. Temperature falling about the third or fourth day.

To exemplify the above I here give condensed reports of two typical cases taken almost at random :—

- (1.) *Severe type.*—(No. 14), Private L—, admitted April 5th. T. 103·8, P. 120. Pain in right side. Bilious vomiting. Bowels loose. R. 32. Physical examination reveals harsh breathing at both bases; more marked on the right side where there is friction. Sputa pneumonic.

6th. Better, T. 99·8, evening 103·6; P. 120; R. 28. Vomiting.

7th. Vomiting ceased. Sputa more bronchitic. Large crepitation audible over bases of both lungs.

8th. Able to lie on right side.

10th. Not so well. T. 100·4–102·6. Restless. Sputa rusty.

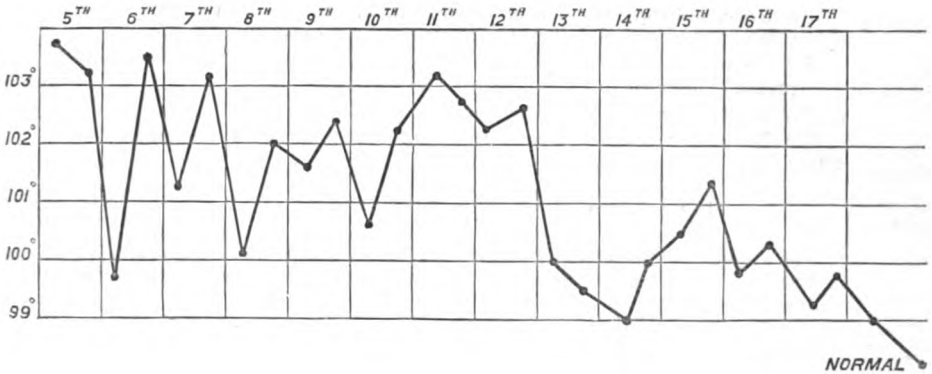
11th. Breathing rapid, 48, P. 120, T. 103·2. Pain in right side, lies on left. No mental disturbance.

13th. Doing better. Good night. Sputa bronchitic.

16th. No further symptom of acute character.

23rd. Still dulness at right base; probably pleuritic. Lung recovering use.

May 16th. Discharged.



(2.) *Mild (or abortive) type.*—(No. 26), Private M — :—

May 9th. Brought to hospital this morning. Complains of pain all over left side. Shivery. Headache. Felt ill yesterday, but continued work.

T. 102.8, P. 92. Some dulness, and deficient respiration over left side with coarse râles.

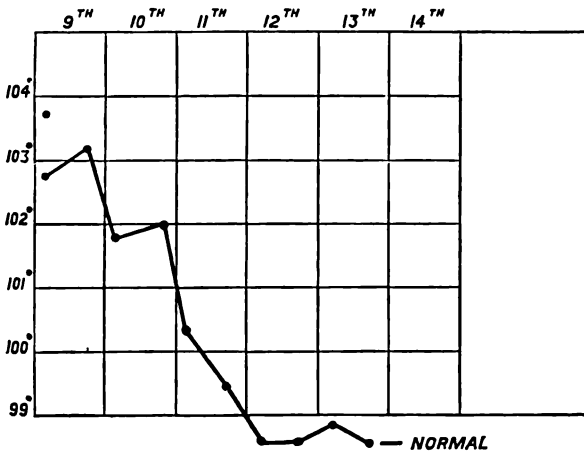
10th. T. 101.8 (evening 102), P. 82, R. 24. Sweating. Pain in left side, deficient movement, and râles.

11th. Temp. falling; otherwise no change. Face still flushed.

12th. Deficient breathing on both sides, but all acute symptoms subsided.

14th. No further symptom.

24th. Discharged.



The above cases almost sufficiently describe the symptoms of those attacked, but some of the more important may be discussed in detail :—

(1.) *Headache.*—A constant symptom, accompanied by flushed face and suffusion of conjunctivæ. Delirium not frequent.

(2.) *Vomiting.*—Frequent on admission, but with varying persistence.

- (3.) *Diarrhœa*.—Rare on admission, but supervening in a considerable number of cases.
- (4.) *Sputa*.—Characteristic of pneumonia (i.e., viscid and rusty) in as many as 31 out of the 41 cases recorded. It was variable in quantity and persistence, subsequently becoming bronchitic. In one of the fatal cases (with marked consolidation) the patient did not expectorate at all.
- (5.) *Pleurisy* is noted as accompanying the pneumonia in 12 cases; it was probably more frequent, but masked by the latter.
- (6.) *Jaundice* occurred in several cases.
- (7.) *Temperature*.—In nearly every case it was at or about the highest on admission. In only 4 cases was it below 103.
 In 16 cases it rose above 105.
 In 6 (of these) it rose above 106.
 In 2 cases it rose above 107.

The average day on which temperature fell for all cases was the seventh. There are several other points of interest as serving to throw light (or the contrary) on the subject.

- (a.) *The frequency with which both lungs were affected* is remarkable considering the low rate of mortality:—

		Both lungs.	One lung.
2nd Bn. Scots Guards	-	15	13
1st Bn. Buffs	-	6	7
Total	-	21	20

or one half of the entire number.

This is admitted to be a peculiarity of pneumonic outbreaks, but there is little doubt that in some cases the attack on the lung was abortive, the inflammation not passing beyond the stage of congestion. As, however, no return is permitted by the nomenclature under the latter head, all cases where the lung was affected in this way were returned as pneumonia. This is an important point to bear in mind.

- (b.) *The average time under treatment* of the cases admitted into the Richmond Barracks Hospital was 34·7 days.
- (c.) *Habits of men attacked* were inquired into, but with little result, the greater number being returned as of "regular, active, and sober habits."

Intemperate, Scots Guards, 5. Buffs, 1.
Old soldiers " 2. " "
Recruits " 2. " 1.

- (d.) *Distribution*.—Many attempts were made to localize the epidemic, but without success; the distribution being very even, as shown below:—

2nd Bn. Scots Guards	{	A Block, 4 cases.
	{	B " 4 "
	{	C " (occupied as married quarters) none.
	{	D " 3 cases.
	{	E " 2 "
	{	F " 5 "
	{	G " 1 "

Total - - - 19 out of 28 Guardsmen attacked.

The remainder occupied adjacent huts.

Throughout, no case occurred amongst patients in hospital, and none amongst women or children, officers, or non-commissioned officers (except one corporal).

Post-mortem appearances.—To render these notes more complete I now give abstracts of the conditions observed in the four post-mortems made.

The two first occurred at the very commencement of the outbreak (during my absence on a fortnight's leave), and before anything more than sporadic

pneumonia was anticipated. Consequently the intestines and other abdominal organs do not appear to have been investigated, As, however, death occurred on the fifth and seventh days no lesion of enteric character would probably have been present.

- (1.) *No. 6. Corporal C—, 2nd Bn. Scots Guards.*—Right lung affected throughout, of red colour, liver-like consistence, and sinking in water. Granular on section; bronchial tubes plugged with lymph. Base of lung covered with recent lymph.
- (2.) *No. 7. Private C—, 2nd Bn. Scots Guards.*—Adhesions over surfaces of both lungs, especially behind. Both organs in advanced pneumonic condition, being engorged throughout; grey hepatization in parts; of soft consistence, breaking down readily on attempted removal.
- (3.) *No. 34. Private M—, 1st Bn. Buffs.*—Treated in Richmond Barrack Hospital.

(This case differed clinically in many ways from any other. It commenced in the usual way with severe pneumonia, ran a tedious irregular course, complicated with diarrhoea, and gradually sank, the veins (iliac) being occupied by large thrombi. It therefore resembled somewhat enteric, and on the 26th day of the disease the nomenclature was changed. On the occurrence of death six days subsequently no decisive enteric lesion was found, and orders were received to alter it back again.)

Post-mortem notes.—Left lung adhered by firm bands; posterior part congested and solidified, but floated in water. Right lung, adherent behind. Pleura contained 10 ozs. of thin fluid. Lower lobe congested deeply; also the middle. Diaphragmatic surface disorganised and gangrenous.

Abdominal organs fairly healthy. Intestines normal, except about 24 inches of ileum extensively congested and of dark chocolate colour. Peyer's patches enlarged, but without ulceration.

Right iliac and femoral veins occupied by firm fibrous clot, the vein being quite obliterated for 6 or 7 inches in the thigh. Left vein in same condition but less marked.

- (4.) (No. 37.) *Private B—, 1st Bn. Buffs.*, was a case very similar to 1 and 2, proving fatal on fifth day. The post-mortem notes taken by Surgeon Keays, Medical Staff, appear very exact, and I therefore give them more fully.

(Clinical notes.—Admitted to Royal Infirmary with physical signs of pneumonia, consisting of crepitation over base of right lung, dulness on percussion over both, with bronchial breathing, bronchophony, and increased fremitus. These continued till death on fifth day. Meningo-encephalitis also present.)

Post-mortem notes.—Right pleural cavity containing 10 ozs. of bloody serum. Lung adherent to thorax and diaphragm by recent lymph. Lower and middle lobes hepatized (red); upper lobe healthy, but coated with lymph. Weight, 26 ozs.

Left lung.—Lower lobe, and posterior part of upper, solidified. Bronchi filled with viscid bloody mucus.

Heart occupied by fluid blood or decolourized clots.

Head.—On opening the skull about 2 ozs. straw coloured fluid visible. Dura mater congested. Sinuses filled with black fluid blood. Excessive vascularity (both venous and arterial) of superior surface and also of substance of brain. Glandulæ pacchionial enlarged and increased in number. Arachnoid, opaque from a lymph deposit, especially on upper surface of cerebellum. Vessels at base of brain universally congested. Section of the cerebrum showed tissue normal, but punctæ cruentæ increased in size and number. Ventricles filled with serum. Choroid plexus normal. Cerebellum deeply congested and slightly softened. Weight, 3 lbs. 8 ozs.

Small intestine.—Congestion of arborescent arterial character, commencing about the middle of jejunum, became better marked in the ileum. Mucous membrane was of claret colour and softened. Solitary glands enlarged, as also the mesenteric lymphatic glands.

II.—THE NATURE OF THE EPIDEMIC.

Such, then, being a brief statement of the actual facts as recorded at the time, we may now consider the nature and causes of the outbreak.

A medical board was assembled with this object, but I am unaware of the conclusions they arrived at, further than is stated in the last columns of the nominal roll on page 1a. These remarks were appended to a report, called for at the time, to which, by the courtesy of the Director General, I have been allowed access. The Army Medical Reports, 1884, which I presume embody their opinion, state that "during March, April, and May pneumonia of a somewhat epidemic character prevailed in 2nd Bn. Scots Guards stationed at Richmond Barracks, causing 36 admissions and 3 deaths." (Some of these were Bufts.) "The weather at the time was cold and variable, and keen east winds prevailed. The matter was carefully investigated, but without satisfactory results."

It will thus be seen that the outbreak was considered pneumonic by the Principal Medical Officer, Dublin, and others. At the same time it should be stated that a doubt was expressed by some as to the pneumonic character of all these cases. This question I touched on above, and to my mind it is clear that the lungs were thus affected in *all* cases, though with varying severity, sometimes not passing beyond the congestive stage. At all events, it will not be denied that if pneumonia was not present in every case, its frequency is shown by the presence of pneumonic sputa in 31 cases; and if it was not the *primary* disease it was an early and striking feature.

This brings us naturally to the important question of a possible typhoid origin, a theory that necessarily presented itself from the first appearance of the outbreak.

The following were the main points of difference, as pointed out by me at the time:—

Pneumonia.		Enteric.
1. Sudden attack	-	Period of incubation.
2. Lung symptoms, early	-	Lung symptoms, late.
3. Diarrhoea, occasional	-	Diarrhoea, usual.
4. Absence of eruption	-	Eruption, usual.
5. Temperature, highest on admission	-	Temperature, gradual rise.
6. " irregular course	-	" regular course.
7. " falls suddenly	-	" gradual fall.
8. Comparatively rapid convalescence	-	Comparatively slow ditto.
9. In many cases abortive	-	Fever runs its course.
10. No intestinal ulceration	-	Intestinal ulceration.

In addition to the above points, the fact of no *typical* cases of enteric having occurred during this period is important.

In speaking of the outbreak under discussion, I wish here to observe that I use the term "epidemic" in its popular application to the occurrence of a series of cases in rapid succession amongst a community, without committing myself in regard to contagiousness or infection. The term is very generally used in outbreaks of the disease under discussion.

An objection raised at the time against the pneumonic origin of the disease was that the death rate was so small, especially considering the number of cases in which both lungs were affected. This, however, I believe to be now admitted as characteristic of these epidemics. It is in answer to this objection that I here quote the well-known outbreak recorded by Penkert as having occurred at Rietnordhausen in 1881. The similarity of facts and figures is truly remarkable.

Rietnordhausen.

Population, 700.
 Attacked, 42.
 Deaths, 4.
 Months, March–May.
 Character, "mostly typical, some abortive."

Richmond Barracks.

Strength, 750.
 Attacked, 41.
 Deaths, 4.
 Months, March–May.
 Character, "mostly typical, some abortive."

The similarity in the above cannot be denied, and we may therefore with advantage inquire to what Dr. Penkert attributed the attack. He states that the village consisted of one street running down the side of a hill, at the bottom of which was the school attacked. The buildings had been erected four years before and lay to the east of a graveyard; cattle sheds and stables surrounded the yard on the west, a stagnant pond intervening.

The first cases occurred in children going to the school, which was so placed as to receive the emanations from this pond. There was at the same time a rise of subsoil water on account of previous heavy rains, as well as a considerable increase of temperature, which had previously been very low.

Dr. Penkert states that the cases were "mostly typical, some abortive, and "there was nothing in their symptoms requiring special mention." The explanation he offers is important, and seems highly probable. He considers that "the churchyard, pond, and stables, separately or collectively, generated "a specific poison conveyed by the prevailing wind through the school "windows."

In some of these cases it should be added that Penkert thought he could trace direct contagion, adult relations of the children having been attacked in like manner in their homes.

This latter fact here raises an important question. Granted that epidemic pneumonia is now a recognised disease, two separate varieties appear to have been described by observers:—

- (1.) *Infectious pneumonia*, in which the specific contagia are conveyed from the sick to the healthy by means of air, rendered impure from respiration and insufficient ventilation.
- (2.) *Pythogenic pneumonia*, occurring simultaneously in a community as the result of a common cause (possibly non-specific) to be found in noxious emanations of various sorts, such as sewer gas, chemical works, &c.

If two forms such as the above be recognised it will explain some discrepancies of evidence, especially as to latency of the lung symptoms.

In the outbreak I am describing there was nothing to point to the first variety. The cases occurred in all parts of the barracks occupied as quarters by the men, and not one commenced amongst the sick in hospital though no attempt was made at isolation.

Reliable evidence has, however, been adduced in favour of both forms, which I may briefly refer to here.

I.—*Infectious pneumonia*.—One of the most remarkable is described by Dr. Patchett, where a family of five elderly people, four brothers and a sister, lived together on a steep hill side with *good sanitary surroundings* and apart from any known epidemic or septic influence. The men were well-to-do farmers. On January 13th, 1876, James, the eldest, was taken ill and died in six days with typical pneumonia. The day before his death John (the next in age) had a rigor, and three days after his brother, he also died of pneumonia. The day after John's death the two remaining brothers suddenly got pneumonia, and both died of it. There was now but the sister left. She had nursed her brothers throughout and kept her health remarkably well. But the day after the death of the last two she also was seized with pneumonia of the right lung, and died in three days. Thus in less than a fortnight the entire family was swept away by a disease described as typical pneumonia.

In another outbreak, four children, the mother, and the mother's mother, were *successively* attacked fatally when no insanitary condition could be discovered. It was also noticeable that those members of the family habitually together were attacked, the others escaping.

In addition to clinical evidence of the same character we have, of course, the similar disease of pleuro-pneumonia occurring in cattle, which would seem to afford striking confirmation of the infection theory. There can be little doubt that in this disease the contagia are of the nature of micro-cocci, and are conveyed by means of an atmosphere charged with the products of respiration. Surgeon-Major Costello (I.M.S.) goes further, and expressly attributes a very severe outbreak of pneumonia to the fact of his regiment (1st Punjab Infantry) having marched through districts known to be affected with

bovine pleuro-pneumonia. He states, "it was almost confined to two companies, and when it appeared amongst the married it spread to different members of the family. And when cases were taken to hospital it spread to other patients ill of other diseases."

[N.B.— This it will be observed is exactly what did *not* occur at Richmond Barracks.]

"Removal from barracks to tents, isolation of affected persons and attendants, immediately arrested the progress of the disease."

In further corroboration of the theory of a specific contagium is the discovery by Friedlander of a special parasite termed by him the micro-coccus pneumoniae. Dr. Fraenpel has taken this micro-coccus from patients suffering from pneumonia, and has succeeded in cultivating it in infusion of meat gelatine. He succeeded thus in innoculating rabbits, which died in 24–48 hours with inflammation of both lungs.

Dr. Friedlander's own experiments showed that animals are of varied susceptibility. In mice (which seem peculiarly liable) he was very successful in producing pleuro-pneumonia, which proved fatal in three and four days. The post-mortems showed reddish turbid fluid in pleural cavities. The lungs were red, contained no air, and presented numerous patches of red hepatization.

[N.B.— A very similar condition to that found in the post-mortems already reported by me.]

II.—*Pythogenic pneumonia*.—The second form of epidemic pneumonia to which I have referred has been named pythogenic in order to explain its supposed nature and origin. It has been defined as a *local expression of a general disease of which it is not necessarily the measure*, and it is in this class that I consider the present outbreak should be placed. The description given by the same writer (Dr. O. Sturges, in the "British Medical Journal") so exactly agrees with my own experience that I quote at length. He says:—

"It is a form of pneumonia occurring suddenly, or, as I may say, accidentally, in previously healthy persons; running a short orderly course, and ending in the vast majority of cases in complete recovery."

"There is nothing more striking I think, nothing to the clinical student more attractive, than the absolute suddenness with which the disease fastens upon its victim, at his work or his play; prostrating him there and then as does no other disease of our clime."

Further on he remarks:—

"There is evidence enough by this time that sewer gas may cause pneumonia. It may be, no doubt is, that in certain of these cases there is a weather cause as well; and the part taken by the sewer poison is merely that of predisposing cause. But in many there has been no weather exposure at all; only exposure to the sewer gas."

Examples of this variety are numerous.

- (1.) I have already given details of the epidemic described by Dr. Penkert at Rietnordhausen.
- (2.) The oft-quoted outbreak at East Sheen School, where five persons were almost simultaneously attacked on the opening of a large sewer for ventilating purposes. Of the five attacked only one died; therein differing, as I have pointed out, from the fatality of the other form.
- (3.) Another outbreak occurred in the Constabulary Barracks, Phoenix Park, Dublin, when it is reported that the general characters of the pneumonia were suddenness of invasion, and great rapidity of progress; the lung rapidly passing into hepatization.
- (4.) Dublin, indeed, would appear to have a "bad pre-eminence" in epidemics of this sort. Drs. Grimshawe and Moore reported the prevalence of pneumonia, apparently of pythogenic origin, as long ago as 1874. Their evidence is very similar to the conclusions I had independently arrived at. They pointed out that it was "*rather congestion than inflammation of the lung, having a close relationship to enteric fever.*" "The severer forms followed nearly the course of true pneumonia." Owing to the difficulty of separating their cases from enteric fever on the one hand and true pneumonia on the other, the writers were "unable to

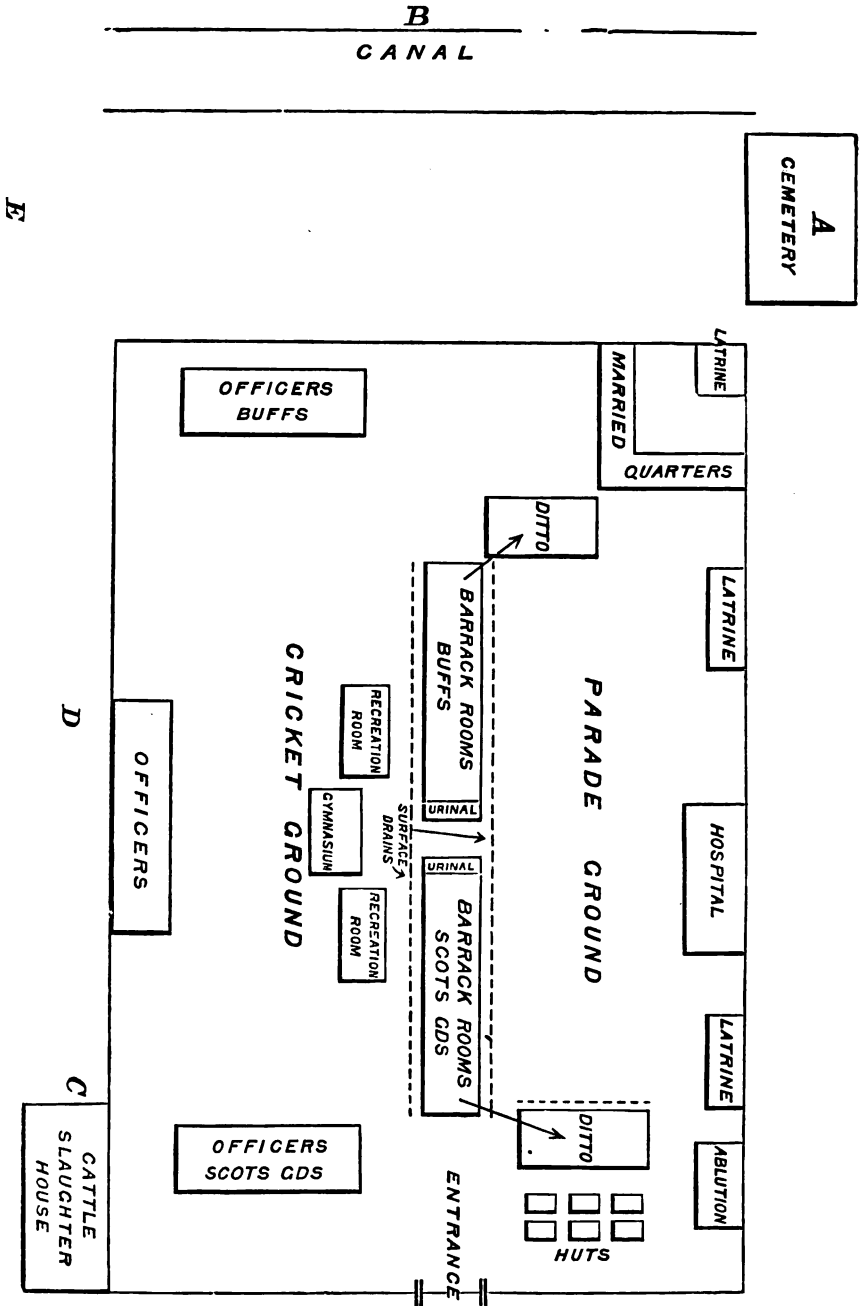
"fix precisely the mortality of pythogenic pneumonia, but it *did not appear to be usually fatal*." It is important to observe that in the one instance where post-mortem examination was made the lung presented the same appearances as in ordinary pneumonia. Clinically, however, the authors were disposed to distinguish it therefrom owing to its "extremely sudden invasion, the frequency with which the disease was arrested at an early stage, and its being less liable to attack the lower lobe of the right lung."

All these points it will be observed I have insisted on throughout, though not then acquainted with these writers' views.

If the evidence of these observers, then, can be relied on, we appear to have two distinct forms of epidemic pneumonia; the infectious, having a specific origin, and the pythogenic, not necessarily specific. Other observers, however, make no distinction, and it is, I think, conceivable that the two morbid influences may be at work together. There is nothing to prevent sewer gas conveying the specific contagia in some attacks. Dr. Bradbury, writing in 1884, "could not help thinking that cases of so-called infectious or contagious pneumonia were cases where some septic influence, such as sewer gas, was at work either (1) depressing the health of members of the household or locality, and thus rendering them more vulnerable to atmospheric influence, such as cold, wet, &c.; or (2) poisoning the air with some septic agent which on being introduced into the system set up the constitutional disturbance and the local mischief in the lung."

To revert now to the occurrence of pythogenic pneumonia, as I shall henceforth term it, at Richmond Barracks, it will naturally be asked, supposing the character of the outbreak to point to this origin of the epidemic, what evidence have you to adduce as to the septic influences producing it?

To explain my remarks on this subject I give here a sketch map of Richmond Barracks and surroundings:—



The site should be a good one, being three miles outside Dublin and on raised ground. There is plenty of space allowed. There are, however, several objectionable surroundings :—

- A.—*A cemetery*.—The proximity of a cemetery is known to have caused illness, and on analysis the air of such places is found impure.
- B.—*The canal*, which is on higher level than the barracks. It is probably owing to this that when excavations are made a few feet in depth the water rapidly wells up in places. Pettenkoffer, it may be remembered, attaches great importance to a high subsoil water as a cause of illness.
- C.—*A slaughter-house and cattle yard*, which are not always kept in the best order.
- D.—*Market gardens*, which I believe to be dressed at times with sewage manure.
- E.—*There are chemical works* at some distance, from which an unpleasant odour is perceived when the wind is in a certain quarter.

I am unable to say definitely that any of these caused illness, but, as in the case of Penkert's outbreak, they may "separately or collectively generate a specific poison to be conveyed by prevailing winds."

As to the buildings themselves, they are modern and built on a good plan, with a large parade ground on one side and a cricket ground on the other. There is free passage of air through the barrack-rooms. The ablution arrangements are defective, as the men have to go long ways (often with little on) to wash.

The Principal Medical Officer in the Report for 1884 states that "conservancy arrangements are good except at Richmond Barracks, where the means for removal of night soil is defective;" and later on "drainage at Richmond Barracks is bad, and difficulties exist with regard to its improvement."

The arrangements he refers to are that the solid excreta are removed by night carts; small drains carrying off surface water and urine. I am not aware that there is any sanitary objection to the former process if efficiently performed. But my opinion, judging both from my own observations and those of my successors, is that the condition of the drains referred to leaves much to be desired, and may possibly have been the origin of the outbreaks. They run all over the barracks, but noticeably alongside of the barrack-rooms, as shown in sketch. Owing to the occurrence of enteric fever which, however, I believe to have been typho-malarial, and brought home by troops from the Soudan in 1885, Surgeon-Major Campbell, Grenadier Guards, had many of these opened, and their condition is best described by extracts from the sanitary diary.

"November 25th, 1885.—Drain in front of C passage, married quarters, smelling offensively. Many complaints made by families living in this passage about the smell.

"November 30th.—This drain partially opened and found to contain solid sewage to a depth of 6 inches throughout its entire length.

"December 3rd.—The Royal Engineer department on opening up drains round the married quarters found them all more or less stopped up with semi-solid sewage.

"December 12th.—Drain leading from canteen crosses road, and goes underneath the men's barrack-rooms. It has not yet been found coming out on the other side.

"December 26th.—Main drain across barrack square is being opened and cleansed; in many cases it contains a deposit of semi-solid sewage to depth of nearly 2 feet. Found a large hole made up with masonry, and containing a quantity of black coloured semi-fluid substance behind officers' mess. Seems uncertain what this place has been; an old well, or a cesspool?

"Find a drain running from the urinal under the clock tower in front of the E block of barrack-rooms, which, when opened up, was found to contain much semi-solid matter."

I should explain that the masonry hole, supposed to be an old well or cess-pool, was subsequently explained to me to be a kind of reservoir, built round

the pumps which formerly supplied the barracks with water. They were not filled in when a water supply was laid on, and thus got in the state described. There are several of these. I saw one opened myself, and the contents were very offensive.

The drains opened up were all masonry ones, with nearly flat bottoms, and often in bad repair. They have now been replaced by ordinary drain pipes. I also think that the semi-fluid sewage complained of was the result of mud mixed with decomposing urine which was thus unable to run off. Anyhow, it will be admitted that the condition described was one calculated to produce the septic poison required to give rise to an epidemic.

The Principal Medical Officer in the succeeding year (1885) reports, that "owing to the occurrence of several cases of enteric fever, without apparent cause, the drainage, water supply, and general sanitary condition of the barracks and their surroundings was made the subject of an exhaustive inquiry. The result has been that several defects in drainage have been brought to light. Some old drains were discovered which required filling up. These defects are now being remedied, and many improvements have been already carried out."

That septic influences are still at work (notwithstanding the sanitary improvements reported by the Principal Medical Officer, 1885) is a conviction forced upon me by subsequent experience, which the following extracts from the admission and discharge book render evident. I relieved Surgeon-Major Campbell, at that time surgeon, 1st Battalion Scots Guards, in 1886, and was much struck by the number of admissions in the ensuing spring, having the same symptoms as in 1884, but of less severity, and minus the chest affection. These were returned as simple continued fever:—

1884.

—	Admissions.	Average duration.
Pneumonia - - -	36	Days. 34·7
Enteric fever - - -	2	53
Simple continued fever -	13	13·3

1885.

Pneumonia - - -	13	Days. 42
Enteric* - - -	2	22
Simple continued fever -	24	one being fatal in 4 days. 13·4

1886 (first half of year only).

Pneumonia - - -	8	Days. 33·7
Enteric - - -	Nil	Nil
Simple continued fever -	25	12·2

* There were six other admissions, three being fatal, which occurred in men who had served in Soudan campaign, 1885.

† As the battalion left Dublin in August 1886 I am unable to give the statistics for the second half year. It is noticeable, however, that of the 25 cases of simple continued fever in 1886, 24 occurred in the three months, March-May.

I append a few notes of these taken at random :—

Private B—. Admitted 16th March 1886. Headache, furred tongue, rigors. T. 103·3, falling on third day. Vomiting, constipation, and some pain in chest. Discharged on 26th (10 days).

Private A—. Admitted 5th May 1886. Headache, vomiting, dyspnoea, foul tongue; symptoms chiefly dyspeptic. Discharged on 18th (14 days).

Private McK—. Admitted off parade 14th May 1886; quite well previously. T. 103, falling on third day. Headache, vomiting, and pain in hepatic region. No cough or expectoration. Discharged 5th June 1886 (23 days).

Case admitted 18th June 1886. T. 101·2 on admission, rising to 104 at night. Next day, 104·2, evening 103. Normal next day. Headache, pain in back, and diarrhoea. Discharged on 28th (11 days).

It will be granted, I think, that these cases present a remarkable likeness to those of the previous outbreak, but without the lung complication. Were they due to the same origin?

Although they occurred after many of the drains had been taken up and cleaned, I think that the old masonry work having been in bad repair would allow of a certain amount of leakage into the neighbouring soil, where the poison might remain latent.

At all events, I believe I have proved that several insanitary conditions exist (or were existing at the time of the pneumonic outbreak) which, together or separately, originated the epidemic.

III.—GENERAL CONCLUSIONS.

It was my intention under this heading to compare the conclusions at which I have arrived with those of the Committee of the British Medical Association, who published their investigations in August 1884 (*i.e.*, subsequently to the epidemic I have described). I find, however, that I have already written so fully that space does not permit. The report contains statistics of much interest in relation to pneumonia, some of which I have made use of to substantiate my own views. It loses considerably in value, however (at least, from the aspect in which I have regarded the disease), by the inquiry not being limited to the epidemic form of pneumonia.

For instance, only 19 cases are attributed to a pythogenic origin. It will be found, however, that not one of these was fatal, a peculiarity which I have so frequently insisted upon.

Of infectious pneumonia there are 20 cases, 5 of which were fatal.

My own conclusions are briefly as follows :—

I.—Pneumonia may be of three varieties :

1. Simple or sporadic, the result of exposure to cold winds, &c.
2. Infectious, the result of contagion.
3. Pythogenic, the result of impure air or gases.

The outbreak at Richmond Barracks was not due to cold winds, &c. (as believed by some), because pneumonia was not specially prevalent in Dublin at the time. Surgeon Carte, Coldstream Guards, at that time acting surgeon to the Royal Military Hibernian School, and also doing duty at the Royal Hospital, Kilmainham, writes : “The number of cases of pneumonia in Dublin in 1884 did not exceed the usual average. I, myself, had charge of the adjacent Royal Hibernian School (600 strong) that year, and had only two or three cases. Also of the Royal Hospital, Kilmainham, and of Kilmainham Gaol, and saw very little of the disease.”

It was not infectious, because it did not spread in hospital or elsewhere.

There is strong presumption from the nature of the epidemic, and the insanitary conditions shown to exist, that it belonged to the third class.

II.—Pythogenic pneumonia then, as already defined, is a general disease of septic origin, the lung affection being “the local expression of a general disease of which it is not necessarily the measure.”

The poison appears to be absorbed directly into the blood through the medium of the lungs, thus explaining the short period of incubation.

In slight forms pyrexia, headache, and vomiting are produced ; in more severe forms the lung tissue is especially attacked.

III.—There does not appear any reason why the special contagia of the infectious form should not be also present in some epidemics, in which case the disease is more severe and there is a period of incubation, the result resembling the pneumonia of enteric fever.

IV.—Finally, the same gases, contagia, &c. being absorbed by water and so entering the intestinal tract may produce ordinary enteric, named by some pythogenic, fever.

V.—There is, therefore, distinct relationship between the three diseases—simple (so called) continued fever, pythogenic pneumonia, and enteric fever ; and for purposes of classification I should propose to return all three under the heading of “ pythogenic fever,” the pulmonary or intestinal manifestations depending on the mode of attack.

APPENDIX No. XIII.

APPENDIX

Annual Abstract of Meteorological Observations taken

NETLEY.

Lat. 50° 51' N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Minimum.	
			Min.	Max.	Temp.	Day.	Temp.	Day.			Mean.	Per Cent.
January -	29° 632	37° 6	30° 3	44° 3	20° 3	8th	56° 0	17th	202	88° 9	45° 0	7th
February -	29° 036	35° 2	29° 3	43° 0	19° 8	10th	49° 5	13th	182	88° 0	72° 0	24th
March -	29° 900	40° 3	32° 7	48° 3	17° 5	7th	63° 5	23rd	227	89° 1	61° 0	7th
April -	29° 948	50° 1	37° 9	58° 6	28° 8	13th	78° 0	27th	276	75° 3	58° 0	23rd
May -	29° 840	56° 0	45° 4	63° 4	29° 0	1st	77° 5	8th	338	74° 0	50° 0	1st
June -	29° 924	61° 0	47° 7	71° 8	40° 0	5th	83° 0	28th	368	67° 6	57° 0	15th
July -	29° 871	65° 9	52° 4	73° 0	44° 0	2nd	90° 0	4th	436	63° 4	51° 0	9th
August -	29° 937	65° 1	53° 6	72° 6	43° 0	3rd	80° 0	22nd	466	74° 0	55° 0	11th
September -	29° 954	60° 1	50° 9	70° 5	41° 0	11th	82° 0	1st	416	77° 3	54° 0	17th
October -	29° 695	55° 2	45° 9	62° 5	33° 0	22nd	77° 0	8th	393	87° 0	72° 0	2nd
November -	29° 841	45° 4	37° 2	52° 3	27° 0	23rd	62° 0	1st	279	90° 0	72° 0	6th
December -	29° 677	38° 0	31° 8	45° 4	19° 0	3rd	55° 2	6th	193	83° 8	38° 8	20th
Mean -	29° 854	50° 8	41° 4	58° 8	30° 2	—	71° 1	—	313	80° 2	57° 1	—

GIBRALTAR.

Lat. 36° 6' N.

January -	30° 012	52° 7	45° 5	58° 6	37° 0	19th	64° 7	13th	369	93° 7	77° 0	31st
February -	30° 066	54° 7	47° 1	61° 3	33° 6	7th	67° 4	1st	398	92° 3	81° 0	1st
March -	30° 137	58° 7	53° 5	64° 5	48° 3	13th	71° 0	17th	451	91° 0	62° 0	7th
April -	29° 919	60° 2	51° 9	65° 5	45° 5	20th	72° 5	8th	465	89° 0	72° 0	12th
May -	30° 039	67° 1	57° 4	72° 0	46° 0	13th	82° 3	11th	525	78° 0	50° 0	8th
June -	29° 996	71° 8	61° 3	77° 7	57° 4	1st	83° 7	26th	594	75° 0	46° 0	12th
July -	29° 899	75° 4	67° 9	80° 5	59° 6	2nd	85° 6	24th	650	73° 9	51° 0	23rd
August -	30° 000	74° 7	69° 7	80° 7	56° 9	14th	86° 0	10th	715	83° 0	60° 0	11th
September -	30° 058	73° 1	68° 3	78° 8	60° 9	24th	85° 5	17th	667	81° 0	55° 5	10th
October -	30° 030	64° 4	58° 4	71° 2	45° 0	20th	80° 0	13th	497	81° 0	53° 6	15th
November -	29° 985	58° 4	53° 4	63° 4	44° 0	22nd	68° 5	4th	421	84° 6	56° 6	29th
December -	30° 145	55° 4	50° 1	61° 7	40° 0	1st	66° 0	20th	363	81° 5	51° 7	2nd
Mean -	30° 031	63° 8	57° 0	69° 6	47° 8	—	76° 1	—	510	83° 3	59° 2	—

SCUTARI CEMETERY.

Lat. 41° 0' N.

January -	29° 927	47° 7	43° 1	55° 1	31° 4	4th	62° 6	21st	265	78° 3	65° 8	21st
February -	30° 058	43° 2	38° 9	49° 9	28° 4	27th	65° 6	6th	236	84° 2	58° 6	7th
March -	29° 980	41° 8	35° 2	48° 7	26° 4	13th	57° 8	31st	222	83° 2	64° 8	14th
April -	30° 022	52° 2	43° 0	61° 6	32° 8	4th	72° 6	12th	299	75° 4	54° 4	25th
May -	29° 943	61° 5	51° 8	69° 7	37° 2	7th	80° 2	16th	395	71° 5	51° 2	26th
June -	29° 798	73° 0	61° 2	84° 8	56° 0	26th	99° 4	22nd	528	62° 4	36° 8	26th
July -	29° 803	74° 3	61° 2	85° 6	53° 4	5th	100° 0	26th	531	62° 0	42° 0	26th
August -	29° 847	77° 5	63° 8	89° 8	50° 8	1st	96° 4	12th	541	56° 9	35° 0	12th
September -	30° 010	71° 3	58° 8	80° 9	49° 0	29th	87° 6	6th	466	59° 3	36° 2	24th
October -	30° 060	63° 1	54° 8	71° 5	45° 4	31st	79° 4	1st	413	70° 1	44° 8	4th
November -	30° 080	52° 8	47° 0	59° 8	32° 6	30th	70° 0	9th	312	76° 6	44° 4	10th
December -	29° 978	51° 5	46° 3	58° 2	34° 6	1st	67° 0	4th	283	73° 3	55° 0	24th
Mean -	29° 963	59° 2	50° 4	67° 9	40° 3	—	78° 2	—	374	71° 1	49° 1	—

No. XIII.

at Netley and Foreign Stations in the Year 1886.

Long. 1° 20' W. Height of Barometer Cistern above Sea, 47 feet.

Mean amount of Cloud.	Rainfall.			Weather.									Wind.								
	Total.	Max.	Day.	Number of Days of									Means of Observations under each Point per Month.								
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gale.		N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
6.2	4.00	0.50	12th	22	2	—	—	—	10.5	7.0	3	2.0	4.0	—	4.5	1.0	10.5	2.5	5.5	1.0	—
7.6	0.71	0.15	3rd	7	—	—	—	—	1	4.0	19.0	1	2.5	15.0	0.5	1.5	0.5	1.5	—	5.0	1.5
6.7	2.56	0.48	2nd	16	4	—	—	—	4	7.5	19.0	2	2.0	6.5	2.0	7.5	0.5	10.5	1.0	1.0	—
5.5	0.07	0.60	7th	14	1	—	—	—	1	11.5	14.5	6	2.5	10.0	1.5	3.5	2.0	6.5	1.5	2.5	—
5.9	3.31	0.50	27th	15	—	—	—	—	1	10.0	15.0	3	1.0	5.5	1.0	8.5	0.5	10.0	—	4.5	—
4.6	0.49	0.20	9th	7	—	—	—	—	1	15.0	7.5	—	6.0	7.0	—	0.5	1.0	7.0	—	8.5	—
5.2	2.61	0.61	12th	11	—	—	—	—	—	13.0	7.0	1	2.0	1.0	—	3.5	1.5	14.0	1.5	7.5	—
5.1	1.58	0.50	23rd	10	—	—	—	—	—	12.0	7.5	—	2.5	3.5	—	1.0	0.5	12.5	1.5	6.5	3.0
5.5	2.18	0.98	2nd	12	—	—	—	—	2	11.0	11.0	2	3.5	9.0	—	1.0	—	12.5	0.5	3.0	0.5
6.6	5.27	0.77	1st	25	—	—	—	—	4	7.5	13.0	3	2.0	7.0	2.5	6.0	0.5	7.0	3.0	3.0	—
6.7	3.25	0.55	5th	18	—	—	—	—	1	7.5	16.5	1	1.5	5.0	1.0	1.5	1.0	10.5	3.5	4.5	1.5
8.0	5.63	1.25	26th	22	1	—	—	—	2	0.5	21.0	1	3.5	0.5	1.0	1.0	1.5	6.5	0.5	5.0	5.5
6.1	2.80	0.59	—	14.9	0.66	—	0.41	1.25	9.16	13.2	2.1	2.5	6.1	0.8	3.3	0.8	9.1	1.3	4.7	1.09	—

Long. 5° 20' W. Height of Barometer Cistern above Sea, 53 feet.

4.1	7.64	1.75	26th	14	—	—	—	—	9.5	—	—	—	3.5	1.0	0.5	—	2.5	5.5	17.5	—	—
3.5	2.75	1.10	16th	7	—	—	—	—	10.5	—	—	—	6.5	5.5	—	—	2.0	7.0	7.0	—	—
4.5	4.48	3.26	11th	7	—	—	—	—	6.0	—	—	—	1.0	11.0	—	—	2.5	9.5	7.0	—	—
4.5	5.10	1.50	26th	17	—	—	—	—	7.5	3.0	—	—	3.5	13.0	1.0	—	1.0	2.5	9.0	—	—
3.0	0.19	0.07	31st	5	—	—	—	—	15.5	1.5	—	—	3.0	10.0	—	—	3.0	4.5	10.5	—	—
2.2	—	—	—	—	—	—	—	—	21.0	—	—	—	3.0	8.0	—	—	3.5	10.5	5.0	—	—
2.5	0.06	0.06	19th	1	—	—	—	—	21.5	—	—	—	0.5	19.0	—	—	0.5	10.0	1.0	—	—
3.5	—	—	—	—	—	—	—	—	14.0	0.5	—	—	3.0	21.5	—	—	—	6.5	—	—	—
4.0	0.49	0.27	23rd	2	—	—	—	—	12.0	0.5	—	—	8.0	8.0	—	—	3.0	8.5	2.5	—	—
4.0	2.74	1.18	18th	8	—	—	—	—	12.0	—	—	—	3.0	6.0	—	—	1.5	13.5	7.0	—	—
4.5	7.06	1.87	11th	14	—	—	—	—	7.0	6.0	—	—	4.0	5.5	2.5	—	2.5	8.0	7.5	—	—
4.0	2.39	0.92	23rd	10	—	—	—	—	14.5	3.5	—	—	4.0	2.5	—	—	0.5	9.5	13.5	1.0	—
3.6	2.74	0.99	—	7.1	—	—	—	—	12.5	1.1	—	—	3.6	9.2	0.3	—	1.8	7.9	7.3	0.08	—

Long. 29° 3' E. Height of Barometer Cistern above Sea, 60 feet.

6.4	1.89	0.46	12th	12	—	—	—	1	7.5	15.5	—	3.0	4.5	2.5	3.5	8.5	5.5	—	0.5	3.0	—
7.6	3.70	0.49	28th	19	3	1	—	1	4.0	21.5	—	11.5	8.0	1.5	1.0	1.5	1.0	—	0.5	2.0	—
7.9	3.64	0.90	4th	18	8	1	—	—	4.5	21.0	—	13.5	5.0	1.5	0.5	2.0	3.5	1.0	0.5	3.5	—
6.2	1.39	0.55	17th	15	—	1	1	1	9.5	14.0	—	12.5	9.5	0.5	—	3.5	2.0	0.5	0.5	1.0	—
4.0	1.84	0.71	19th	10	—	—	—	—	13.5	11.0	—	9.0	4.5	—	—	8.0	7.0	1.5	—	1.0	—
3.2	0.90	0.80	17th	3	—	—	—	3	17.0	2.5	—	1.5	6.0	3.0	—	4.5	11.5	1.0	—	2.5	—
2.2	1.17	0.62	7th	7	—	—	6	1	20.0	4.0	—	0.0	9.5	1.5	—	5.5	7.0	1.0	—	—	—
2.8	1.41	1.38	28th	3	—	—	3	1	19.0	2.0	—	4.0	16.5	4.0	0.5	2.0	3.0	—	—	1.0	—
4.0	1.76	0.93	17th	5	—	—	2	—	14.5	4.0	—	2.5	12.0	5.5	—	1.5	4.0	—	—	4.5	—
4.5	2.08	0.58	29th	10	—	—	—	1	13.0	8.0	—	2.5	9.5	4.5	1.0	2.5	6.5	1.0	—	3.5	—
6.5	2.47	0.73	25th	11	—	1	—	—	7.0	16.0	—	4.5	6.0	2.0	1.0	5.0	4.5	2.0	—	5.0	—
5.8	1.61	0.70	11th	13	—	—	—	—	8.5	14.0	—	2.5	1.5	1.0	3.5	9.0	9.0	2.0	—	2.5	—
5.1	1.98	0.73	—	10.7	0.9	0.3	1.2	0.6	11.5	11.1	—	6.1	7.7	2.3	9.1	4.4	5.3	8.3	0.2	2.4	—

Appendix

Annual Abstract of Meteorological Observations taken

NICOSIA, CYPRUS.

Lat. 35° 10' N.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Minimum.		
			Min.	Max.	Temp.	Day.	Temp.	Day.			Mean.	Per Cent.	Day.
January	—	52·1	42·4	63·5	37·0	1st	67·0	26th	·360	93·6	60·7	5th	
February	—	54·6	42·1	64·5	37·0	28th	69·5	9th	·361	80·5	67·0	26th	
March	—	56·6	42·0	66·3	35·0	12th	73·2	19th	·363	68·0	63·0	14th	
April*	—	59·6	40·8	69·1	34·2	6th	75·2	10th	·398	75·4	51·0	4th	
May	}												
June													
July													
August													
September													
October	}												
November													
December†	—	53·9	41·9	62·6	38·0	19th	67·0	25th	·342	80·6	50·3	20th	
Mean	—	55·3	41·8	65·2	36·2	—	70·3	—	·364	79·6	58·4	—	

* 11 days only.

† 17 days only.

POLYMEDIA, CYPRUS.

Lat. 34° 40' N.

January -	-	30·101	57·3	46·2	66·0	40·0	5th	69·2	15th	·307	64·8	37·6	5th
February -	-	29·984	58·8	44·7	66·5	39·0	26th	75·0	9th	·307	61·4	36·7	10th
March -	-	29·768	60·3	42·4	67·1	38·0	13th	73·8	18th	·325	61·2	33·8	14th
April -	-	29·993	68·0	42·2	77·0	36·0	5th	95·0	30th	·382	53·2	66·0	5th
May -	-	29·924	74·9	58·0	84·0	48·2	11th	100·0	16th	·470	52·9	40·0	11th
June* -	-	29·780	77·4	58·6	87·5	57·4	5th	89·9	2nd	·647	60·2	64·6	4th
July -	-												
August -	-												
September -	-												
October† -	-	30·003	78·7	61·2	89·4	45·0	31st	98·5	26th	·600	59·0	37·0	11th
November -	-	30·179	66·4	49·3	75·7	40·0	5th	80·5	24th	·456	63·8	53·0	11th
December -	-	29·965	60·0	44·3	69·5	40·0	20th	75·0	6th	·427	82·0	68·0	15th
Mean -	-	29·965	60·9	49·6	75·7	42·6	—	84·1	—	·435	62·6	48·5	—

* 5 days only.

† 26 days only.

MOUNT TROADOS, CYPRUS.

Lat. 34° 37' N.

January -	-												
February -	-												
March -	-												
April -	-												
May -	-												
June* -	-	29·407	67·2	55·3	77·7	48·0	19th	85·0	24th	·339	49·6	47·0	16th
July -	-	29·303	68·6	56·4	81·5	45·0	5th	90·0	30th	·393	55·6	49·0	6th
August -	-	29·306	70·9	57·9	84·4	58·5	31st	95·0	13th	·490	64·6	48·7	7th
September -	-	29·516	63·5	51·6	73·5	44·5	30th	80·2	27th	·457	77·4	48·0	8th
October -	-												
November -	-												
December -	-												
Mean -	-	29·383	67·5	55·3	79·8	49·0	—	87·5	—	·419	61·8	47·9	—

* 17 days only.

No. XIII.—*continued.*

at Netley and Foreign Stations in the year 1886.

Long. 33° 21' E. Height of Barometer Cistern above Sea, 592 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
	Total.	Max.	Day.	Number of Days of								Means of Observations under each Point per Month.								
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
5.0	1.58	0.85	5th	6	—	1	1	—	10.0	8.0	—	5.0	5.0	3.0	—	3.0	4.0	8.0	3.0	—
5.5	4.97	2.30	21st	14	—	1	1	—	7.0	6.0	—	4.0	—	2.0	2.0	5.0	3.0	12.0	—	—
6.0	2.03	0.55	2nd	14	—	—	1	—	4.0	11.0	—	5.0	—	4.0	—	—	2.0	19.0	1.0	—
5.0	0.05	0.05	5th	1	—	—	—	—	2.0	2.0	—	1.0	—	1.0	—	2.0	—	7.0	—	—
3.0	0.73	0.60	15th	2	—	—	—	—	9.0	3.0	4	1.0	1.0	7.0	1.0	—	2.0	3.0	3.0	1.0
4.9	1.87	0.87	—	7.4	—	0.4	0.6	—	6.4	6.0	0.8	3.2	1.2	3.4	0.6	2.0	2.2	9.8	1.4	0.2

Long. 33° 0' E. Height of Barometer Cistern above Sea, 460 feet.

4.3	3.23	1.35	4th	3	—	—	2	—	19.0	7.0	—	5.0	3.5	6.0	0.5	2.0	1.5	6.0	5.5	1.0
4.8	3.71	1.40	2nd	16	—	—	—	—	8.0	6.0	—	5.0	6.5	2.0	3.0	1.0	1.0	5.0	4.5	—
5.8	5.69	1.07	2nd	22	—	5	9	—	7.0	12.0	—	1.0	3.0	1.0	4.0	2.0	6.0	10.0	4.0	—
4.0	0.61	0.36	5th	8	—	—	1	—	11.0	3.0	—	1.5	2.5	7.5	5.5	2.0	5.5	4.5	1.0	—
4.0	0.82	0.25	10th	6	—	—	—	—	9.0	3.0	—	0.5	—	2.5	3.0	2.5	9.5	10.5	2.5	—
3.7	—	—	—	—	—	—	—	—	5.0	—	—	—	—	1.0	—	—	3.0	0.5	0.5	—
4.0	0.19	0.13	17th	2	—	—	—	—	17.0	3.0	—	3.0	2.5	2.0	0.5	3.0	0.5	12.5	1.0	1.0
4.5	0.23	0.18	6th	3	—	—	—	—	8.0	2.0	—	3.5	4.5	4.5	—	1.0	1.0	10.5	3.0	—
5.5	4.61	2.75	10th	8	—	—	—	—	4.0	7.0	—	8.5	6.0	4.5	2.0	0.5	0.5	5.0	3.5	0.5
4.5	2.12	0.83	—	7.5	—	0.5	1.3	—	9.8	4.7	—	3.4	3.1	3.4	2.05	1.5	3.1	7.1	2.8	0.3

Long. 32° 55' E. Height of Barometer Cistern above Sea, 5,700 feet.

2.5	—	—	—	—	—	—	—	—	17.0	—	—	4.5	2.0	—	0.5	1.5	3.0	4.5	1.0	—
2.0	0.03	0.03	7th	1	—	—	—	—	20.0	4.0	—	11.0	7.5	2.0	0.5	1.5	5.0	1.0	2.5	—
2.5	0.15	0.09	31st	2	—	—	—	—	20.0	2.0	—	6.0	6.5	1.5	0.5	1.5	5.0	7.5	2.5	—
3.2	1.03	0.96	15th	2	—	—	—	—	17.0	2.0	—	10.0	4.0	2.0	—	1.0	4.0	5.0	4.0	—
2.5	0.30	0.27	—	0.7	—	—	—	—	18.5	2.0	—	7.8	5.0	1.3	0.4	1.1	3.3	3.3	2.5	—

Appendix

Annual Abstract of Meteorological Observations taken

MALTA.

Lat. 35° 53' N.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Min.		
			Min.	Max.	Temp.	Day.	Temp.	Day.	Mean.		Per Cent.	Day.	
January -	29°798	55·8	51·9	55·7	43·0	12th	62·0	8th	·361	81·2	66·2	24th	
February -	29°910	56·5	51·3	55·8	44·0	7th	59·0	5th	·393	85·2	71·2	20th	
March -	29°968	57·0	51·8	56·8	45·0	12th	60·2	24th	·364	76·8	64·4	27th	
April -	29°969	61·2	56·4	60·7	51·0	14th	64·0	7th	·428	79·0	62·2	11th	
May -	29°969	66·2	60·0	65·7	52·0	7th	76·0	29th	·509	80·0	62·0	30th	
June -	29°942	72·3	66·2	72·0	61·0	2nd	77·0	29th	·579	72·3	59·0	23rd	
July -	29°969	78·1	71·6	77·9	67·9	15th	84·0	25th	·686	71·0	59·8	14th	
August -	29°926	78·0	72·6	78·2	69·0	20th	82·0	12th	·712	73·8	54·0	12th	
September -	30°017	76·7	71·3	76·7	65·0	14th	81·0	6th	·760	81·0	68·8	9th	
October -	30°031	74·4	69·4	74·5	64·2	31st	83·2	20th	·653	76·4	62·4	21st	
November -	30°003	61·0	59·3	64·0	51·0	22nd	74·0	13th	·474	77·0	57·8	21st	
December -	29°980	57·3	53·3	57·3	46·0	30th	64·4	20th	·371	77·7	65·0	31st	
Mean	29°965	66·4	61·2	66·3	54·9	—	72·2	—	·524	77·6	61·9	—	

FORT NAPIER, NATAL.

Lat. 29° 3' S.

January -	29°776	74·9	63·2	88·6	51·2	12th	108·5	8th	·609	69·2	31·0	13th
February -	29°911	75·5	63·8	87·5	58·0	25th	101·0	15th	·661	74·0	42·0	19th
March* -	—	—	—	—	—	—	—	—	—	—	—	—
April† -	29°993	65·7	55·8	78·9	51·6	24th	89·0	11th	·489	76·6	48·0	19th
May -	30°126	61·7	49·2	78·0	38·5	29th	87·5	6th	·345	61·2	25·8	19th
June -	30°074	57·6	45·3	77·5	40·8	4th	87·6	16th	·287	59·8	35·9	14th
July -	30°106	56·2	41·8	68·9	31·5	7th	80·0	16th	·255	48·4	28·9	9th
August -	30°020	59·0	46·7	74·8	64·4	21st	95·2	26th	·305	57·4	35·7	6th
September -	30°029	68·6	53·4	79·4	65·5	13th	102·0	23rd	·395	54·0	27·0	19th
October -	29°934	69·0	56·4	82·9	48·8	18th	105·8	29th	·450	61·6	30·0	29th
November -	29°959	69·2	55·8	78·7	45·5	8th	100·8	19th	·452	62·0	29·0	10th
December -	29°913	70·3	59·8	81·0	52·5	12th	99·2	10th	·511	67·8	40·0	1st
Mean	29°985	67·9	53·7	79·6	40·8	—	96·0	—	·432	62·9	33·9	—

* No return received.

† For 20 days only.

SIERRA LEONE.

Lat. 8° 29' N.

January -	29°879	82·4	82·3	91·6	71·0	11th	98·0	4th	·978	87·0	67·4	11th
February -	29°897	81·2	82·3	93·4	80·0	17th	97·0	1st	·954	88·0	71·3	14th
March -	29°919	81·0	82·0	93·8	70·0	11th	97·0	3rd	·947	89·0	70·6	10th
April -	29°914	81·2	84·0	94·3	81·0	21st	97·0	4th	·956	89·0	73·3	18th
May -	29°891	80·1	82·1	92·3	70·0	11th	98·0	3rd	·973	97·0	73·6	14th
June -	29°900	80·4	83·0	93·0	79·0	3rd	97·0	16th	·940	90·0	69·2	7th
July -	29°903	79·6	78·7	95·6	69·0	23rd	98·0	27th	·706	91·0	67·8	6th
August -	29°970	80·1	83·5	95·0	80·0	17th	98·0	9th	·820	93·0	89·0	8th
September -	29°896	80·8	85·0	95·3	80·0	4th	99·0	8th	·795	92·0	89·0	4th
October -	29°937	79·8	84·0	95·0	81·0	17th	97·0	3rd	·908	92·5	89·0	2nd
November -	29°890	81·2	84·0	95·0	80·0	5th	98·0	4th	·897	89·4	72·3	17th
December* -	29°897	81·7	76·1	95·0	70·0	28th	96·0	7th	·971	89·5	85·0	4th
Mean	29°824	80·8	82·2	94·1	75·9	—	97·6	—	·908	90·6	76·4	—

* Observations only taken for 16 days.

No. XIII.—continued.

at Netley and Foreign Stations in the Year 1886.

Long. 14° 30' E. Height of Barometer Cistern above Sea, 70 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
	Total.	Max.	Day.	Number of Days of								Means of Observations under each Point per Month.								
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
5.0	4.93	1.45	15th	14	—	—	—	—	11.0	10.0	—	—	1.0	—	8.0	1.0	8.0	1.0	12.0	—
5.0	3.28	0.75	19th	12	—	—	—	—	11.0	5.0	—	—	4.0	1.0	5.0	1.0	5.0	1.0	11.0	—
4.5	0.73	0.40	6th	4	—	—	—	—	11.0	6.0	—	—	11.0	—	4.0	—	2.0	3.0	11.0	—
3.0	0.69	0.15	25th	6	—	—	—	—	12.0	15.0	—	1.0	3.0	—	10.0	—	1.0	2.0	13.0	—
2.5	—	—	—	—	—	—	—	—	16.0	1.0	—	1.0	6.0	6.0	8.0	1.0	1.0	1.0	7.0	—
1.0	0.05	0.05	12th	1	—	—	—	—	24.0	1.0	—	1.0	7.0	—	2.0	—	2.0	—	18.0	—
0.6	—	—	—	—	—	—	—	—	28.0	—	—	2.0	10.0	1.0	3.0	1.0	2.0	1.0	11.0	—
1.8	—	—	—	—	—	—	—	—	32.0	—	—	1.0	4.0	—	4.0	—	—	1.0	21.0	—
4.0	3.50	0.95	21st	11	—	—	3	—	15.0	8.0	—	—	8.0	3.0	7.0	—	2.0	—	10.0	—
5.2	0.55	0.25	12th	3	—	—	—	—	7.0	7.0	—	—	5.0	3.0	11.0	—	2.0	—	10.0	—
5.0	6.83	3.40	15th	13	—	—	—	—	7.0	9.0	—	—	6.0	3.0	5.0	—	4.0	2.0	10.0	—
5.6	4.31	0.80	3rd	16	—	—	—	—	8.0	12.0	—	—	1.0	—	—	3.0	6.0	2.0	18.0	—
3.5	2.07	0.68	—	6.6	—	—	0.2	—	13.7	6.2	—	0.5	5.5	1.4	5.6	0.6	3.0	2.6	11.1	—

Long. 30° 2' E. Height of Barometer Cistern above Sea, 2,294 feet.

6.1	8.64	2.50	15th	16	—	—	7	—	9.5	15.0	2	5.5	10.5	3.0	4.5	4.0	1.0	1.0	1.0	2.5
5.2	8.17	3.10	21st	15	—	—	12	—	12.0	12.5	—	4.5	8.0	1.0	7.0	2.0	—	—	0.5	5.0
5.6	2.54	0.75	28th	6	—	—	2	—	7.5	10.0	1	—	5.0	1.0	7.5	0.5	1.0	0.5	0.5	4.0
2.0	0.66	0.32	13th	4	—	—	4	—	22.0	4.0	1	—	10.0	0.5	4.0	1.5	10.0	1.0	3.5	—
1.3	0.10	0.05	21st	2	—	—	1	1	26.0	2.5	—	0.5	11.5	1.5	1.5	1.0	11.0	0.5	0.5	2.0
2.3	0.45	0.21	18th	4	—	—	3	1	23.0	5.0	1	1.0	7.0	2.0	1.5	3.5	9.5	—	0.5	6.0
2.3	0.96	0.35	22nd	5	—	—	—	—	23.0	4.0	2	4.5	9.0	4.0	2.0	2.0	4.5	—	1.5	3.5
3.4	0.46	0.40	26th	2	—	—	3	—	19.5	9.0	3	3.0	9.5	5.0	1.5	1.0	1.0	0.5	5.5	3.0
6.2	0.92	0.25	6th	11	—	—	7	—	10.5	17.0	5	2.5	9.0	5.0	6.0	1.5	1.0	—	3.5	2.5
5.5	5.88	1.50	26th	13	—	—	7	—	10.5	17.0	2	2.0	7.0	4.5	3.0	5.0	1.5	—	2.0	5.0
6.4	4.97	1.70	24th	13	—	—	7	—	9.5	15.5	2	4.0	5.0	9.5	3.0	6.0	1.0	—	—	2.5
4.3	3.07	1.05	—	8.2	—	—	4.8	0.2	15.7	10.1	1.7	2.5	8.3	3.3	3.7	2.5	3.7	0.3	1.7	3.2

Long. 13° 9' W. Height of Barometer Cistern above Sea, 224 feet.

—	0.11	0.11	29th	1	—	—	—	—	30.0	—	—	10.0	2.0	4.0	2.0	8.0	1.0	1.0	—	3.0
—	—	—	—	—	—	—	—	—	25.0	—	—	10.0	—	3.0	2.0	10.0	1.0	1.0	1.0	—
—	0.05	0.05	16th	1	—	—	—	—	30.0	—	—	10.0	1.0	4.0	3.0	8.0	1.0	3.0	—	1.0
—	7.93	1.80	28th	11	—	—	9	—	21.0	—	—	10.0	1.0	3.0	1.0	6.0	3.0	3.0	—	3.0
—	13.74	2.83	29th	15	—	—	17	—	8.0	—	—	14.0	1.0	1.0	—	9.0	—	1.0	1.0	4.0
—	16.27	3.50	17th	14	—	—	3	—	16.0	—	—	10.0	1.0	4.0	1.0	8.0	3.0	2.0	—	1.0
—	39.61	6.14	25th	27	—	—	5	—	4.0	—	—	9.0	2.0	3.0	2.0	6.0	2.0	2.0	2.0	3.0
—	54.17	3.42	16th	20	—	—	4	—	27.0	—	—	8.0	—	2.0	3.0	6.0	11.0	1.0	—	—
—	32.83	5.15	23rd	24	—	—	7	—	20.0	—	—	11.0	—	4.0	2.0	8.0	2.0	2.0	1.0	—
—	16.52	3.15	27th	9	—	—	8	—	23.0	—	—	10.0	1.6	7.0	1.0	7.0	1.0	3.0	1.0	—
—	10.25	3.15	4th	7	—	—	6	—	23.0	—	—	8.5	1.0	4.5	1.5	8.0	1.5	3.5	1.5	—
—	5.33	4.30	2nd	3	—	—	—	—	28.0	—	—	3.0	—	1.0	1.0	3.0	—	—	1.0	7.0
—	16.40	2.80	—	11.7	—	—	4.9	—	21.5	—	—	9.4	0.8	3.4	1.6	7.1	2.2	1.9	0.6	1.8

Appendix

Annual Abstract of Meteorological Observations taken

BARBADOS.

Lat. 13° 7' N.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Min.		
			Min.	Max.	Temp.	Day.	Temp.	Day.	Mean.		Per Cent.	Day.	
January .	30°008	81°7	—	83°3	—	—	84°0	1st	797	72°4	66°5	19th	
February .	29°985	81°1	—	82°0	—	—	85°0	4th	715	66°1	57°5	18th	
March .	30°009	83°0	—	83°0	—	—	89°0	29th	699	60°0	61°3	13th	
April .	30°078	83°6	73°9	86°4	64°0	1st	90°0	24th	751	66°8	55°5	11th	
May .	30°037	84°2	73°6	87°0	73°0	4th	90°0	27th	796	65°8	52°0	27th	
June .	29°984	84°8	80°3	87°3	84°0	19th	90°0	10th	801	65°0	69°5	22nd	
July .	29°983	82°6	76°5	86°0	73°0	19th	89°0	28th	815	74°8	68°9	7th	
August .	29°963	83°1	78°0	86°7	73°0	20th	89°0	28th	853	74°8	60°4	31st	
September .	29°939	83°4	79°4	86°9	72°0	8th	89°0	13th	872	75°6	60°8	4th	
October .	29°791	83°2	79°0	86°0	72°0	3rd	91°0	8th	880	76°4	65°4	29th	
November .	29°970	81°1	—	81°5	—	—	86°0	1st	896	79°6	57°4	13th	
December .	29°968	81°0	—	82°5	—	—	86°0	10th	740	70°0	59°4	2nd	
Mean .	29°978	82°7	77°9	85°0	73°0	—	88°2	—	803	70°6	61°3	—	

UPPER PARK CAMP, JAMAICA.

Lat. 17° 59' N.

January -	30°070	83°0	—	—	—	—	—	—	—	—	—	—	—
February -	30°061	84°0	68°0	90°0	60°0	20th	100°0	22nd	791	57°0	68°1	13th	
March -	30°038	84°9	68°0	93°0	64°0	5th	99°0	31st	757	59°7	65°7	4th	
April -	30°037	84°9	70°3	93°0	64°0	16th	99°0	11th	763	60°1	48°0	20th	
May -	30°128	85°4	72°0	92°0	65°0	5th	98°0	23rd	827	66°8	65°7	5th	
June -	30°052	83°9	72°0	91°0	69°0	24th	98°0	4th	809	67°2	43°0	27th	
July -	30°014	84°5	71°0	91°0	70°0	5th	99°0	22nd	788	74°8	51°1	30th	
August -	30°033	84°8	72°0	89°0	70°0	1st	94°0	9th	828	67°6	53°1	15th	
September -	29°995	85°4	71°0	91°0	68°0	13th	96°0	16th	841	75°2	67°2	6th	
October -	29°979	82°9	71°0	90°0	66°0	17th	99°0	13th	828	70°8	57°4	29th	
November -	30°042	83°9	69°0	90°0	64°0	29th	94°0	18th	745	66°0	41°4	23th	
December -	30°033	80°7	68°0	89°0	63°0	3rd	94°0	21st	681	68°6	55°1	24th	
Mean -	30°048	84°0	70°1	90°8	65°7	—	97°2	—	781	66°8	55°9	—	

NEWCASTLE, JAMAICA.

Lat. 18° 6' N.

January -	30°179	61°0	}	Instruments broken.	—	—	—	—	—	—	—	—	—
February -	30°186	62°0			—	—	—	—	—	—	—	—	—
March -	30°200	63°0			—	—	—	—	—	—	—	—	—
April -	30°097	64°0			—	—	—	—	—	—	—	—	—
May -	30°111	64°0			—	—	—	—	—	—	—	—	—
June -	30°135	67°0			—	—	—	—	—	—	—	—	—
July -	30°183	68°0			—	—	—	—	—	—	—	—	—
August -	30°131	67°0			—	—	—	—	—	—	—	—	—
September -	30°177	67°0			—	—	—	—	—	—	—	—	—
October -	30°182	68°0	}	Instruments broken.	—	—	—	—	—	—	—	—	—
November -	30°219	65°0			—	—	—	—	—	—	—	—	—
December -	30°201	63°0			—	—	—	—	—	—	—	—	—
Mean -	30°166	64°8	—	—	—	—	—	—	—	—	—	—	—

No. XIII.—continued.

at Netley and Foreign Stations in the Year 1886.

Long. 59° 40' W. Height of Barometer Cistern above Sea, 30 feet.

Mean Amount of Cloud.	Rainfall.			Weather.									Wind.								
	Total.	Max.	Day.	Number of Days of									Means of Observations under each Point per Month.								
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	
2.3	0.25	0.15	4th	2	—	—	—	—	27.0	2.0	—	3.0	28.0	—	—	—	—	—	—	—	
2.8	1.32	0.42	21st	7	—	—	—	—	14.0	7.0	—	—	25.0	3.0	—	—	—	—	—	—	
2.6	1.30	0.13	30th	4	—	—	—	—	11.0	16.0	—	—	29.0	2.0	—	—	—	—	—	—	
3.9	0.80	0.25	3rd	10	—	—	—	—	12.0	8.0	—	—	21.0	3.0	6.0	—	—	—	—	—	
4.4	2.51	0.24	21st	11	—	—	—	—	12.0	13.0	—	—	18.0	4.0	9.0	—	—	—	—	—	
4.8	3.17	0.45	24th	11	—	—	3	—	10.0	6.0	—	—	30.0	—	—	—	—	—	—	—	
5.3	11.95	2.35	9th	26	—	—	—	—	31.0	—	—	—	20.0	—	—	—	—	—	11.0	—	
5.1	15.19	3.15	15th	11	—	—	—	—	5.0	15.0	—	1.0	21.0	3.0	3.0	3.0	—	—	—	—	
4.6	8.84	2.53	27th	23	—	—	—	—	—	1.0	—	—	13.5	9.5	2.5	1.0	—	1.0	0.5	—	
4.5	10.01	3.20	11th	10	—	—	—	—	13.0	8.0	—	—	15.0	8.0	5.0	1.0	1.0	1.0	—	—	
4.5	10.62	2.20	7th	19	—	—	1	—	—	—	—	1.0	18.0	6.0	3.0	1.0	—	—	—	1.0	
3.1	1.97	0.50	19th	9	—	—	1	—	19.0	1.0	—	—	27.0	3.0	1.0	—	—	—	—	—	
3.9	5.67	1.27	—	12.3	—	—	0.4	—	9.0	6.4	—	0.4	22.1	3.4	2.4	0.5	.08	0.28	0.9	.08	

Long. 76° 56' W. Height of Barometer Cistern above Sea, 245 feet.

2.7	10.22	3.78	11th	5	—	—	1	—	25.0	5.0	—	—	—	—	—	—	—	—	—	—
2.0	3.33	2.73	9th	2	—	—	—	—	26.5	—	—	2.5	2.0	—	15.5	1.0	1.5	2.0	0.5	3.0
2.0	2.29	0.86	21st	4	—	—	—	—	29.0	—	—	0.5	—	—	20.5	0.5	3.5	0.5	0.5	5.0
3.0	3.73	1.80	22nd	6	—	—	—	—	22.0	6.5	—	0.5	1.0	—	17.5	1.5	6.5	1.0	1.5	0.5
2.5	4.89	1.85	7th	8	—	—	—	—	24.5	2.5	—	—	1.0	—	18.5	3.5	7.5	0.5	—	—
4.0	41.40	11.29	6th	11	—	—	3	—	17.0	5.0	—	1.5	1.0	—	12.5	6.0	5.0	—	2.5	5.0
3.5	1.75	0.47	13th	9	—	—	4	—	22.0	—	—	3.0	5.0	—	12.5	4.5	1.5	—	2.5	2.0
4.0	11.99	3.50	19th	12	—	—	3	—	22.0	4.0	—	1.5	2.0	—	13.5	5.5	2.5	1.0	2.0	3.0
4.0	5.91	3.00	21st	10	—	—	—	—	17.0	3.0	—	1.5	1.5	0.5	12.5	3.5	1.5	1.5	2.0	5.5
5.5	5.73	1.15	6th	19	—	—	1	—	—	—	—	1.5	2.5	1.0	10.5	6.5	1.5	0.5	1.0	6.0
3.5	0.26	0.20	11th	3	—	—	—	—	17.0	1.0	—	6.0	2.0	1.0	10.0	4.5	3.0	3.0	5.0	—
4.0	2.90	2.03	25th	9	—	—	—	—	28.0	3.0	—	8.0	11.0	1.0	3.0	2.0	5.0	—	1.0	—
3.4	7.86	2.72	—	8.1	—	—	1.1	—	20.8	2.5	—	2.4	2.4	0.3	13.3	3.5	3.5	0.9	1.7	2.7

Long. 76° 42' W. Height of Barometer Cistern above Sea, 3,800 feet.

4.0	7.08	2.00	25th	13	—	—	—	—	22.0	3.0	6.0	6.0	15.5	—	—	—	—	—	5.5	4.0
3.5	2.69	1.09	8th	13	—	—	—	—	15.0	1.0	—	17.0	5.5	—	—	—	—	—	—	5.5
4.0	1.29	0.27	28th	7	—	—	—	—	16.5	3.5	—	10.0	10.0	—	—	0.5	—	1.0	—	9.5
6.5	9.82	2.25	8rd	15	—	—	—	—	16.0	4.5	—	—	—	—	—	—	—	—	—	13.5
6.0	9.56	2.36	12th	11	—	—	1.0	—	1.0	5.5	—	2.5	8.0	—	—	—	—	—	—	20.5
6.5	41.53	10.70	7th	17	—	—	3.0	—	13.0	—	—	2.0	16.5	—	—	—	0.5	—	—	11.0
6.0	4.57	1.04	28th	13	—	—	2.0	—	2.0	4.5	—	8.0	2.5	—	1.0	—	0.5	—	—	19.0
6.5	33.36	13.90	19th	24	—	—	2.0	—	12.0	—	—	2.5	12.5	—	—	—	—	—	—	16.0
3.5	11.45	1.27	20th	13	—	—	3.5	—	18.5	3.5	—	—	—	—	—	5.0	—	—	—	11.5
6.0	21.51	3.78	25th	24	—	—	2.0	—	9.5	15.0	—	—	—	—	—	—	—	—	—	4.5
4.5	17.08	5.20	2nd	14	—	—	—	—	16.5	8.0	—	—	7.5	—	11.5	—	5.5	—	—	1.5
4.5	9.57	5.80	7th	14	—	—	—	—	16.5	7.0	—	—	9.5	—	6.5	—	2.5	—	—	7.5
5.1	14.15	4.19	—	15.2	—	—	1.1	—	14.0	4.6	0.5	5.5	8.2	.04	1.8	0.4	1.1	0.1	2.8	10.3

Annual Abstract of Meteorological Observations taken

NASSAU, BAHAMAS.

Lat. 25° 5' N.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Min.		
			Min.	Max.	Temp.	Day.	Temp.	Day.			Mean.	Per Cent.	Day.
January -	30°062	68·2	60·9	73·9	53·0	12th	85·5	4th	·535	74·0	60·0	6th	
February -	30°108	70·8	63·5	76·0	57·0	1st	83·7	28th	·587	76·0	52·0	5th	
March -	30°391	74·1	65·5	79·6	58·1	12th	87·6	5th	·567	66·4	59·0	11th	
April -	30°049	74·9	65·9	78·7	62·8	23rd	85·4	27th	·575	61·8	50·0	4th	
May -	30°066	80·7	68·2	85·8	63·2	2nd	91·8	23rd	·663	62·9	49·1	31st	
June -	30°014	84·7	70·2	90·6	66·7	18th	94·9	11th	·827	68·0	49·5	5th	
July -	30°039	86·9	69·2	92·8	65·3	30th	96·8	11th	·807	65·0	52·0	13th	
August -	30°002	85·5	67·5	90·6	62·3	30th	95·8	2nd	·837	73·6	60·4	10th	
September -	30°009	83·1	64·0	88·2	58·5	30th	93·4	13th	·802	69·2	58·4	27th	
October -	30°019	79·9	61·2	84·0	56·0	20th	89·4	3rd	·731	71·0	50·0	14th	
November -	30°115	76·5	57·9	80·5	54·3	22nd	88·1	18th	·638	69·0	51·8	3rd	
December -	30°618	73·1	54·0	77·9	45·5	15th	83·1	24th	·593	70·7	52·9	8th	
Mean	30°124	73·2	64·1	83·2	58·5	—	89·6	—	·679	69·4	54·0	—	

BERMUDA.

Lat. 32° 17' N.

January -	30·070	63·9	—	70·4	—	—	78·4	28th	·476	82·9	53·5	15th
February -	30·063	61·5	—	67·1	—	—	74·6	20th	·442	80·4	44·8	27th
March -	30·069	61·8	44·0	66·9	38·4	5th	74·4	31st	·445	80·4	44·7	2nd
April -	30·068	69·0	51·8	71·1	44·5	19th	75·4	29th	·577	81·0	53·6	11th
May -	30·050	72·1	53·9	76·0	46·8	5th	84·0	31st	·614	78·1	72·3	5th
June -	33·083	78·5	60·3	83·8	49·2	4th	89·0	9th	·785	78·5	52·5	22nd
July -	30·104	79·9	63·9	84·2	54·0	29th	88·4	15th	·847	83·0	66·0	9th
August -	30·102	81·7	65·2	87·0	61·4	1st	90·0	8th	·854	78·7	69·1	10th
September -	30·108	80·0	60·9	85·4	45·0	26th	87·8	12th	·787	75·8	57·8	25th
October -	30·028	72·9	55·6	80·3	48·5	24th	85·2	1st	·756	82·5	54·2	23rd
November -	30·206	69·3	58·6	75·4	51·0	8th	83·2	4th	·635	74·6	57·9	23rd
December -	30·264	67·9	58·2	73·8	53·0	16th	76·9	26th	·470	69·0	59·0	22nd
Mean -	30·095	71·5	57·2	76·8	49·4	—	82·2	—	·632	78·7	57·5	—

FORT CANNING, SINGAPORE.

Lat. 1° 16' N.

January -	29·089	83·6	68·0	94·6	66·2	5th	99·4	8th	·871	82·5	63·2	20th
February -	29·506	80·8	68·0	93·7	63·4	13th	97·8	12th	·919	88·0	73·1	12th
March -	29·811	81·2	69·3	94·1	67·0	6th	98·2	26th	·924	88·0	53·2	26th
April -	29·843	82·6	70·1	93·9	68·6	9th	97·2	21st	·973	87·0	71·0	26th
May -	29·857	82·2	70·7	94·4	67·8	30th	96·0	12th	·979	88·9	72·8	6th
June -	29·841	81·8	69·5	94·4	67·2	27th	95·4	1st	·926	80·0	72·2	1st
July -	29·846	80·9	69·7	94·7	68·0	25th	96·2	24th	·963	90·0	70·6	2nd
August -	29·860	80·0	69·4	94·4	65·0	5th	95·4	30th	·946	90·0	68·0	2nd
September -	29·882	82·1	70·6	95·5	67·0	22nd	97·0	20th	·988	90·0	68·0	26th
October -	29·874	82·3	69·8	95·7	66·4	20th	97·2	16th	·959	87·0	69·0	1st
November -	29·827	83·8	68·7	95·3	66·0	21st	97·6	1st	·988	80·0	70·2	17th
December -	29·829	81·9	68·4	96·1	65·0	16th	98·2	29th	·963	85·9	70·0	24th
Mean -	29·762	81·9	69·3	94·7	66·4	—	97·1	—	·949	87·4	68·4	—

No. XIII.—continued.

at Netley and Foreign Stations in the Year 1886.

Long. 77° 21' W. Height of Barometer Cistern above Sea, 44 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.									
	Total.	Max.	Day.	Number of Days of								Means of Observations under each Point per Month.									
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	
6.5	1.16	0.44	24th	8	—	—	—	—	7.0	13.0	1.0	1.5	4.5	6.5	4.5	1.5	3.5	7.5	1.5	0.5	
6.0	1.35	0.43	15th	9	—	—	—	—	7.0	10.0	—	3.5	10.5	1.0	4.5	1.5	1.5	1.5	1.0	0.5	
5.5	1.61	1.25	9th	6	—	—	—	—	9.0	9.5	1.0	2.0	8.0	3.0	10.5	2.5	3.0	—	2.0	—	
6.0	6.92	2.20	19th	14	—	—	1	—	5.5	10.5	3.5	3.0	7.5	10.5	2.0	1.5	1.0	0.5	1.5	—	
6.2	4.03	0.82	23rd	2	—	—	—	—	14.0	5.0	—	5.5	2.5	7.0	7.5	5.0	—	2.0	1.5	—	
7.3	4.02	1.21	17th	16	—	—	5	—	1.0	15.0	—	—	1.5	4.5	9.5	11.0	2.0	0.5	—	1.0	
7.5	3.41	0.06	3rd	15	—	—	4	—	0.5	16.5	—	—	0.5	5.5	7.5	14.5	1.5	1.5	—	—	
6.6	9.40	3.24	22nd	15	—	—	8	—	1.5	17.0	2.0	4.0	8.0	7.5	4.5	2.5	2.0	2.5	—	0.5	
6.8	8.95	2.50	8th	21	—	—	4	—	2.0	12.0	—	3.0	13.5	7.5	2.0	1.0	0.5	—	2.0	0.5	
7.0	6.03	0.02	20th	16	—	—	4	—	4.0	16.5	1.0	6.0	10.0	12.0	2.0	—	—	—	0.5	0.5	
6.5	0.86	0.25	27th	7	—	—	—	—	4.0	9.5	0.5	6.0	12.0	9.5	1.0	1.0	—	—	0.5	—	
7.2	0.72	0.15	30th	7	—	—	—	0.5	3.0	16.5	—	5.0	6.5	5.0	2.0	8.0	0.5	1.5	6.5	1.0	
6.6	3.78	1.09	—	11.3	—	—	2.3	0.4	4.9	12.6	0.7	3.3	7.1	6.6	4.7	3.7	1.3	1.4	1.3	0.4	

Long. 64° 47' W. Height of Barometer Cistern above Sea, 151 feet.

5.5	2.45	0.81	23rd	11	—	—	—	—	6.0	7.0	—	5.0	2.0	1.0	3.0	2.0	7.0	6.0	4.0	1.0
5.4	—	—	—	—	—	—	—	—	3.0	4.0	—	2.0	1.0	1.0	4.0	1.0	8.0	2.0	9.0	—
0.2	—	—	—	—	—	4.0	—	—	5.0	9.0	—	—	1.0	—	8.0	1.0	18.0	2.0	18.0	—
4.5	—	—	—	—	—	—	1	—	7.0	—	—	4.0	5.0	3.0	7.0	3.0	2.0	4.0	2.0	—
3.4	1.88	1.32	9th	3	—	—	—	—	19.0	1.0	—	8.0	2.0	1.0	2.0	4.0	7.0	5.0	2.0	—
4.4	2.47	1.00	19th	5	—	—	—	—	9.0	2.0	—	3.0	2.0	2.0	6.0	1.0	10.0	3.0	2.0	1.0
5.6	18.21	4.42	30th	13	—	—	5	—	5.0	—	—	—	3.0	1.0	2.0	3.0	17.0	3.0	1.0	—
5.5	4.97	0.84	29th	17	—	—	4	—	7.0	4.0	—	—	1.0	2.0	3.0	5.0	17.0	2.0	1.0	—
5.5	3.96	0.86	5th	15	—	—	4	—	1.0	—	—	1.0	2.0	6.0	3.0	—	4.0	4.0	1.0	—
5.0	4.79	0.95	16th	18	—	1.0	—	—	7.0	6.0	—	2.0	14.0	1.0	2.0	—	10.0	—	2.0	—
5.0	5.80	0.93	7th	13	—	—	—	—	8.0	11.0	—	2.0	8.0	1.0	2.0	2.0	4.0	2.0	9.0	—
5.0	3.05	1.03	30th	15	—	—	—	—	7.0	13.0	—	2.0	6.0	2.0	3.0	2.0	9.0	1.0	6.0	—
5.0	5.28	1.35	—	9.0	—	0.4	1.1	—	6.3	5.0	0.5	2.4	3.9	1.7	3.8	2.2	9.0	2.8	4.2	0.2

Long. 105° 31' E. Height of Barometer Cistern above Sea, 110 feet.

3.4	9.73	2.78	27th	19	—	—	4	—	7.0	1.0	—	1.5	11.0	—	2.5	0.5	—	2.0	13.5	—
3.3	4.08	1.70	2nd	12	—	—	—	—	15.0	2.0	—	2.0	16.5	0.5	1.0	—	—	—	8.0	—
3.4	2.11	0.68	30th	11	—	—	3	—	8.0	1.0	—	—	21.0	0.5	3.0	—	3.5	—	3.0	—
3.5	6.97	1.20	9th	16	—	—	3	1	14.0	1.0	—	0.5	1.0	—	—	—	2.5	—	26.0	—
4.2	8.56	2.65	25th	21	—	—	2	—	8.0	2.0	—	—	—	—	2.0	—	17.5	—	11.5	—
3.7	5.81	1.08	17th	19	—	—	3	—	14.0	2.0	—	—	—	—	3.5	—	19.5	—	7.0	—
3.4	2.16	0.47	3rd	12	—	—	2	—	16.0	1.0	—	—	2.0	—	6.0	—	13.0	—	10.0	—
3.7	14.79	3.56	28th	20	—	—	2	—	16.0	2.0	—	0.5	1.5	0.5	2.0	3.0	12.0	1.5	10.0	—
3.3	7.07	1.45	8th	21	—	—	4	—	15.0	—	—	1.0	2.0	—	2.5	1.5	7.5	7.0	8.5	—
3.3	9.94	3.62	20th	20	—	—	3	—	16.0	1.0	—	—	3.0	—	4.0	—	5.0	4.0	15.0	—
3.3	7.73	2.40	4th	23	—	—	1	—	16.0	—	—	1.0	5.5	—	1.5	—	6.0	3.0	13.0	—
3.3	8.37	1.75	2nd	22	—	—	2	—	15.0	—	—	0.5	10.0	—	1.0	—	5.5	1.0	13.0	—
3.5	7.28	1.94	—	18.0	—	—	2.4	—	13.3	1.08	—	0.58	6.1	0.12	2.4	0.4	8.5	1.5	11.5	—

Appendix

Annual Abstract of Meteorological Observations taken

HONG KONG, CHINA.

Lat. 22° 16' N.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Minimum.		
			Min.	Max.	Temp.	Day.	Temp.	Day.	Mean.		Per Cent.	Day.	
January -	30°121	59°2	54°3	66°5	42°0	31st	78°0	12th	°377	73°0	47°0	31st	
February -	30°157	53°0	51°7	60°8	45°0	1st	67°0	27th	°351	90°2	52°0	1st	
March -	30°045	63°8	59°0	70°6	52°0	26th	81°0	23rd	°521	88°0	72°0	11th	
April -	30°113	72°6	67°0	76°4	61°0	21st	84°0	11th	°661	82°5	57°0	30th	
May -	29°901	79°2	73°1	84°2	65°0	7th	92°0	19th	°777	75°0	40°0	7th	
June -	29°770	83°0	76°7	86°7	66°0	13th	92°0	18th	°851	73°0	64°0	15th	
July -	29°782	83°7	77°5	87°7	72°0	18th	93°0	4th	°895	78°0	61°0	3rd	
August -	29°723	85°3	78°4	88°9	75°0	26th	94°0	8th	°897	74°4	62°0	8th	
September -	29°826	85°1	75°3	89°7	68°0	13th	94°0	18th	°732	59°8	45°0	11th	
October -	30°091	81°4	72°5	86°1	59°0	31st	92°0	12th	°719	66°8	48°0	7th	
November -	30°117	73°7	64°9	79°2	56°0	30th	85°0	10th	°484	57°9	40°0	18th	
December -	30°228	63°7	55°2	70°5	48°0	28th	77°0	5th	°341	55°6	48°0	28th	
Mean	29°969	73°6	67°1	78°9	59°1	—	85°7	—	°633	73°2	53°7	—	

KOROSKO, EGYPT.

Lat. not known.

January -	—	61° 7	53° 3	77° 3	45° 2	9th	92° 8	18th	° 294	43° 9	38° 6	4th	
February -	—	67° 4	56° 6	81° 7	47° 0	4th	97° 0	14th	° 303	46° 1	38° 0	26th	
March -	—	71° 5	60° 1	85° 4	51° 4	5th	95° 6	17th	° 279	35° 6	33° 0	15th	
April -	}												
May -													
June -													
July -													
August -													
September -													
October -													
November -													
December -													
Mean -	—	66° 8	56° 6	81° 4	47° 8	—	95° 1	—	° 292	41° 8	36° 5	—	

* No returns received.

No. XIII.—*continued.*

at Netley and Foreign Stations in the Year 1886.

Long. 114° 9' E. Height of Barometer Cistern above Sea, 18 feet.

Mean Amount of Cloud.	Rainfall.			Weather.									Wind.									
	Total.	Max.	Day.	Number of Days of								Means of Observations under each Point per Month.										
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.		
5.4	1.80	1.22	28th	6	—	—	—	—	9.0	12.0	—	4.0	12.0	7.0	—	—	—	1.0	2.0	5.0		
8.6	1.46	0.85	5th	5	—	—	—	—	—	21.0	—	8.0	8.0	6.0	—	—	—	—	5.0	1.0		
7.4	1.80	0.98	14th	6	—	—	1	—	1.0	16.0	—	13.0	9.0	4.0	1.0	—	—	1.0	1.0	2.0		
6.8	5.81	1.78	24th	10	—	—	2	—	4.0	12.0	—	6.0	8.0	11.0	—	—	—	2.0	1.0	2.0		
2.8	3.49	2.80	31st	4	—	—	1	17.0	7.0	7.0	—	5.0	4.0	10.0	1.0	—	—	1.0	9.0	1.0		
6.7	10.36	1.56	4th	18	—	—	—	—	3.0	11.0	—	2.0	2.0	3.0	3.0	2.0	—	6.0	10.0	2.0		
7.1	30.68	16.4	15th	20	—	—	2	—	1.0	14.0	—	3.0	6.0	5.0	1.0	2.0	3.0	4.0	5.0	2.0		
5.9	11.62	5.80	26th	12	—	—	—	—	4.0	7.0	—	3.0	2.0	4.0	2.0	2.0	1.0	5.0	11.0	1.0		
3.6	5.48	2.80	23rd	5	—	—	1	—	11.0	3.0	—	3.0	3.0	7.0	—	1.0	3.0	1.0	8.0	4.0		
4.3	2.15	1.57	12th	5	—	—	—	—	13.0	5.0	—	2.0	10.0	10.0	3.0	—	—	1.0	3.0	2.0		
2.3	—	—	—	—	—	—	—	—	22.0	1.0	—	2.0	13.0	9.0	2.0	—	—	—	2.0	2.0		
2.9	1.67	1.00	22nd	4	—	—	—	—	21.0	7.0	—	6.0	8.0	9.0	2.0	—	—	1.0	3.0	2.0		
5.3	6.36	3.06	—	8.0	—	—	0.6	1.4	8.0	9.7	—	4.7	7.0	7.0	1.2	0.6	0.6	0.2	5.0	2.2		

Long. not known. Height of Barometer Cistern above Sea feet.

2.3	—	—	—	—	—	—	—	—	27.0	—	—	—	—	—	—	—	—	—	31.0	—
2.8	—	—	—	—	—	—	—	—	20.0	—	—	1.0	2.0	—	—	—	—	—	25.0	—
2.5	—	—	—	—	—	—	—	—	25.0	2.0	—	7.0	13.0	—	—	—	—	—	11.0	—
2.6	—	—	—	—	—	—	—	—	24.0	0.7	—	2.6	5.0	—	—	—	—	—	22.3	—

Appendix

Annual Abstract of Meteorological Observations taken

WADY HALFA, EGYPT.

Lat. not known.

Month.	Mean Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Min.		
			Min.	Max.	Temp.	Day.	Temp.	Day.					
January -	-	59·7	55·5	73·4	46·0	25th	83·8	18th	·263	50·6	39·8	16th	
February	-	64·6	58·0	77·7	47·1	2nd	92·6	13th	·249	42·0	31·6	15th	
March -	}												
April -													
May -													
June -													
July -													
August -													
September													
October -													
November													
December													
Mean	-	62·1	56·7	75·5	46·5	-	92·7	-	·256	46·3	35·7	-	

* No returns received.

ASSOUAN, EGYPT.

Lat. 24° 8' N.

January -	-	58·7	51·7	74·8	45·5	6th	85·0	18th	·271	54·6	34·1	4th	
February -	-	63·3	55·2	78·9	47·5	4th	93·0	13th	·250	43·1	31·2	2nd	
March -	-	69·2	58·6	81·0	51·0	5th	96·0	17th	·253	36·3	34·9	15th	
April -	-												
May -	-												
June -	-												
July -	-												
August -	-												
September -	-												
October -	-												
November -	-												
December -	-												
Mean -	-	63·7	55·1	79·2	48·0	-	91·0	-	·258	44·6	33·4	-	

* No returns received.

No. XIII.—*continued.*

at Netley and Foreign Stations in the Year 1886.

Long. not known. Height of Barometer Cistern above Sea, feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.									
	Total.	Max.	Day.	Number of Days of.								Means of Observations under each Point per Month.									
				Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
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—	—	—	—																		

Long. 33° 3' E. Height of Barometer Cistern above Sea, feet.

2'4	—	—	—	—	—	—	—	—	22'0	2'0	—	11'0	2'0	0'5	0'5	—	—	0'5	16'5	—
2'6	—	—	—	—	—	—	—	—	18'5	3'0	—	21'5	0'5	—	—	—	1'0	0'5	4'5	—
1'5	—	—	—	—	—	—	—	—	26'0	2'5	—	28'0	—	0'5	0'5	—	—	—	2'0	—
2'2	—	—	—	—	—	—	—	—	22'2	2'5	—	20'2	0'8	0'3	0'3	—	0'3	0'8	7'6	—

Summary of Results of Meteorological Observations taken

Stations, with their Height above the Sea.	Air Pressure.	Air Temperature.								Tension of Vapour.	Relative Humidity.			Mean amount of Cloud.
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.		Per Cent.		Min.			
			Min.	Max.	Temp.	Date.	Temp.	Date.			Mean.	Per Cent.	Date.	
Mediterranean : Gibraltar - - - 53	30·031	63·8	57·0	69·6	33·6	7 Feb.	86·0	10 Aug.	·510	83·3	46·0	12 June	3·6	
Malta - - - 70	29·958	66·4	61·2	66·3	43·0	12 Jan.	84·0	25 July	·524	77·6	50·0	23 June	3·5	
Scutari - - - 60	29·963	59·2	50·4	67·9	26·4	13 Mar.	100·0	26 July	·374	71·1	35·6	12 Aug.	5·1	
Cyprus : Nicosia ^a - - - 592	—	55·3	41·8	65·2	34·2	6 Apr.	75·2	10 Apr.	·364	79·6	50·3	20 Dec.	4·9	
Polymedia ^b - - - 460	29·965	66·9	49·6	75·7	36·0	5 Apr.	100·0	16 May	·435	62·6	33·8	14 Mar.	4·5	
Troados ^c - - - 5,700	29·393	67·5	55·3	79·8	44·5	30 Sept.	95·0	13 Aug.	·419	61·8	47·0	16 June	2·5	
Natal, "Fort Napier" ^d 2,294	29·985	67·9	53·7	79·6	40·8	4 June	105·8	29 Oct.	·432	62·9	25·8	19 May	4·3	
Sierra Leone - - - 224	29·824	80·8	82·2	94·1	69·0	23 July	99·0	8 Sept.	·908	90·6	67·4	11 Jan.	—	
West Indies : Barbados - - - 30	29·978	82·7	77·9	85·0	64·0	1 Apr.	91·0	8 Oct.	·803	70·6	52·0	27 May	3·9	
Newcastle, Jamaica - 3,800	30·166	64·8	Instruments have not yet been replaced.											5·1
Upper Park Camp - 245	30·048	84·0	70·1	90·8	60·0	20 Feb.	100·0	22 Feb.	·787	66·8	41·4	29 Nov.	3·4	
Nassau, Bahamas - 44	30·124	78·2	64·1	83·2	45·5	15 Dec.	96·8	11 July	·679	69·4	49·1	31 May	6·6	
Bermuda - - - 151	30·095	71·5	57·2	76·8	38·4	5 Mar.	90·0	8 Aug.	·632	78·7	44·7	2 Mar.	5·0	
Singapore - - - 110	29·762	81·9	69·3	94·7	65·0	16 Dec.	99·4	8 Jan.	·949	87·4	53·2	26 Mar.	3·5	
Hong Kong - - - 18	29·989	73·6	67·1	78·9	42·0	31 Jan.	94·0	8 Aug.	·633	73·2	40·0	18 Nov.	5·3	
Wady Halfa ^e - - - —	—	62·1	56·7	75·5	46·0	25 Jan.	92·6	13 Feb.	·256	46·3	31·6	15 Feb.	—	
Korosko ^f - - - —	—	66·8	56·6	81·4	45·2	9 Jan.	97·0	14 Feb.	·292	41·8	35·0	15 Mar.	2·5	
Assouan ^f - - - —	—	63·7	55·1	79·2	45·5	6 Jan.	95·0	17 Mar.	·258	44·6	31·2	2 Mar.	2·2	

^a 4 months only.^b 9 months only.^c 4 months only.

at Foreign Stations in the Year 1886.

Rainfall.			Weather.										Wind.										Latitude.	Longitude.
Total.	Max.	Date.	Number of Days of								Means of Observations under each Point per Month.													
			Rain.	Snow.	Hail.	Thunder-storm.	Fog.	Clear sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.					
32° 30'	3° 26'	11 Mar.	7.1	—	—	—	—	12.5	1.1	—	—	3.6	9.2	0.3	—	1.8	7.9	7.3	0.08	36° 6' N.	5° 20' W.			
24° 37'	3° 40'	15 Nov.	6.6	—	—	0.2	—	13.7	6.2	—	0.5	5.5	1.4	5.6	0.6	3.0	2.6	11.1	—	35° 53' N.	14° 30' E.			
23° 38'	1° 38'	28 Aug.	10.7	0.9	0.3	1.2	0.6	11.5	11.1	—	6.1	7.7	2.3	9.1	4.4	5.3	8.3	0.2	2.4	41° 0' N.	29° 3' E.			
9° 36'	2° 30'	21 Feb.	7.4	—	0.4	0.4	—	6.4	6.0	0.8	3.2	1.2	3.4	0.6	2.0	2.2	9.8	1.4	0.2	35° 10' N.	33° 21' E.			
19° 09'	2° 75'	10 Dec.	7.5	—	0.5	1.3	—	9.8	4.7	—	3.4	3.1	3.4	2.0	1.5	3.1	7.1	2.8	0.3	34° 40' N.	33° 0' E.			
1° 21'	0° 96'	15 Sept.	0.7	—	—	—	—	18.5	2.0	—	7.8	5.0	1.3	0.4	1.1	3.3	3.3	2.5	—	34° 37' N.	32° 55' E.			
33° 75'	3° 10'	21 Feb.	8.2	—	—	4.8	0.2	15.7	10.1	1.7	2.5	8.3	3.3	3.7	2.5	3.7	0.3	1.7	3.2	29° 38' S.	30° 2' E.			
163° 81'	6° 14'	25 July	11.7	—	—	4.9	—	21.5	—	—	9.4	0.8	3.4	1.6	7.1	2.2	1.9	0.6	1.8	8° 29' N.	13° 9' W.			
67° 93'	3° 20'	11 Oct.	12.3	—	—	1.0	—	9.0	6.4	—	0.4	22.1	3.4	2.4	0.5	0.08	0.28	0.9	0.08	13° 7' N.	59° 46' W.			
180° 81'	13° 9'	19 Aug.	15.2	—	—	1.1	—	14.0	4.6	0.5	5.5	8.2	0.04	1.8	0.4	1.1	0.1	2.8	10.3	18° 6' N.	76° 42' W.			
94° 4'	11° 29'	6 June	8.1	—	—	1.1	—	20.8	2.5	—	2.4	2.4	0.3	13.3	3.5	3.5	0.9	1.7	2.7	17° 50' N.	76° 56' W.			
45° 35'	2° 50'	6 Sept.	11.3	—	—	2.3	0.4	4.9	12.6	0.7	3.3	7.1	6.6	4.7	3.7	1.2	1.4	1.3	0.4	25° 5' N.	77° 21' W.			
47° 38'	4° 42'	30 July	9.0	—	0.4	1.1	—	6.3	5.0	0.5	2.4	3.9	1.7	3.8	2.2	9.0	2.8	4.2	0.2	32° 17' N.	64° 47' W.			
87° 12'	3° 62'	20 Oct.	13.0	—	—	2.4	—	13.3	1.08	—	0.6	6.1	0.1	2.4	0.4	8.5	1.5	11.5	—	1° 16' N.	105° 31' E.			
76° 32'	16° 40'	15 July	8.0	—	—	0.6	1.4	8.0	9.7	—	4.7	7.0	7.0	1.2	0.6	0.6	0.2	5.0	0.2	22° 16' N.	114° 9' E.			
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
—	—	—	—	—	—	—	—	24.0	0.7	—	2.6	5.0	—	—	—	—	—	22.3	—	—	—			
—	—	—	—	—	—	—	—	22.2	2.5	—	20.2	0.8	0.3	0.3	—	0.3	0.3	7.6	—	24° 8' N.	33° 3' E.			

d 11 months only.

e 2 months only.

f 3 months only.

APPENDIX No. XIV.

THE PARKES' MEMORIAL PRIZE.

Surgeon-General Sir T. LONGMORE, Kt., C.B., *President of Committee.*

Surgeon A. M. DAVIES, *Secretary.*

The following is the subject for the next prize :—

ON THE ETIOLOGY AND PREVENTION OF YELLOW FEVER, TO BE ILLUSTRATED, SO FAR AS PRACTICABLE, FROM THE PERSONAL EXPERIENCE OF THE WRITER.

The Prize is One Hundred Pounds in Money and a Gold Medal value Fifteen Guineas.

The Competition is open to all Medical Officers of the Army, Navy, and Indian Services of Executive Rank on full pay, with the exception of the Assistant Professors of the Army Medical School during their term of Office. Essays to be sent to the Secretary of the "Parkes' Memorial Fund," Royal Victoria Hospital, Netley, on or before the 31st day of December 1888. Each Essay to have a Motto, and to be accompanied with a sealed envelope bearing the same Motto and containing the name of the Competitor.

APPENDIX No. XV.

THE ALEXANDER MEMORIAL FUND.

COMMITTEE.

Director-General Sir T. CRAWFORD, K.C.B., M.D., Hon. Surgeon to the Queen, *President*.

Surgeon-General W. A. MACKINNON, C.B.

Surgeon-General T. G. BALFOUR, M.D., F.R.S., Hon. Physician to the Queen.

Surgeon-General Sir T. LONGMORE, C.B., Hon. Surgeon to the Queen, Professor of Military Surgery.

Deputy Surgeon-General J. A. BOSTOCK, C.B., Hon. Surgeon to the Queen.

Brigade-Surgeon ALFRED F. S. CLARKE, M.D.

Inspector-General of Hospitals, R. LAWSON.

Surgeon-General J. IRVINE, M.D., Hon. Physician to the Queen.

Surgeon-Major W. JOHNSTON, M.D., *Honorary Secretary*.

PRIZE ESSAY GOLD MEDALLISTS.

1870. Assistant Surgeon A. B. R. MYERS, Coldstream Guards.

1873. Surgeon F. H. WELCH, Army Medical Department.

1876. Surgeon-Major J. H. PORTER, Army Medical Department.

1879. Surgeon JOHN MARTIN, Army Medical Department.

1882. Surgeon-Major F. H. WELCH, Army Medical Department.

1885. Surgeon JOHN MARTIN, Medical Staff.

1888. Surgeon ROBERT HAMMILL FIRTH, Medical Staff.

The Committee hereby intimate that the prize of 50*l.* and Gold Medal of the value of 10*l.* has been awarded to Surgeon Robert Hammill Firth, F.R.C.S. Eng., Medical Staff, for the best Essay on "The Relations between the Food and Work of the British Soldier."

The subject for the next competition is "The Use of Drugs in the Treatment of Disease in the Army: the Principles on which Medicines should be selected so as to meet the requirements of Field Service."

Essays to be despatched so as to reach the President of the Committee on or before the 31st December 1890.

Essays are to be legibly and clearly written, superscribed with a brief motto, and accompanied by a sealed envelope similarly superscribed, containing the name and address of the author.

No essay shall exceed in length fifty pages of ordinary printed octavo, which may be estimated as amounting to 20,000 words (a page of octavo containing about 400 words). This limit to be exclusive of tables which may be added in the form of appendices.

The competition is limited to executive medical officers of the Army on full pay, but Assistant Professors at Netley are not allowed to compete while so employed.

The essays of unsuccessful competitors at the recent or any of the former competitions will be returned on application to the Honorary Secretary.

W. JOHNSTON, M.D., Surgeon-Major, Hon. Sec.

Medical Division, War Office, 2, Victoria Street, S.W.,
March 19th, 1888.

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